

### THE SHIP CAPTAIN'S

# MEDICAL GUIDE

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#### WARRY LEACH, MIRC.P.

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#### WILLIAM SPOONER, L.R.C.P. LORG, M.R.C.S.

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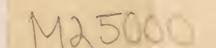
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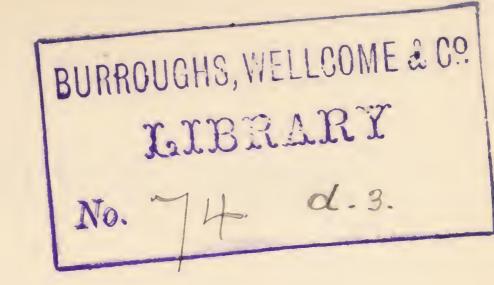
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THOS. G. ACKLAND, F.I.A., F.S.S., Actuary and Manager. JAMES H. SCOTT, F.S.S., Secretary.

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THE SHIP CAPTAIN'S

MEDICAL GUIDE

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LONDON

### THE SHIP CAPTAIN'S

# MEDICAL GUIDE

COMPILED BY

#### HARRY LEACH, M.R.C.P.

MEDICAL OFFICER OF HEALTH FOR THE PORT OF LONDON, AND PHYSICIAN TO THE 'DREADNOUGHT' SEAMEN'S HOSPITAL

REVISED BY

WILLIAM SPOONER, L.R.C.P. LOND., M.R.C.S.

MEDICAL INSPECTOR OF THE BOARD OF TRADE

FORMERLY SURGEON IN THE UNION STEAMSHIP COMPANY

TENTH EDITION

LONDON

SIMPKIN, MARSHALL, HAMILTON, KENT, & CO., LIMITED 1890

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#### OFFICIAL NOTICE.

The Board of Trade have sanctioned this Book in the following words:—

WHEREAS it is provided by the 'Merchant Shipping Act, 1867,' as follows, viz.:—

The Board of Trade shall from time to time issue and cause to be published Scales of Medicine and Medical Stores suitable for different ships and voyages, and shall also prepare or sanction a book or books containing instructions for dispensing the same:

The owners of every ship navigating between the United Kingdom and any place out of the same shall provide and cause to be kept on board such ship a supply of medicines and medical stores in accordance with the scale appropriate to the said ship, and also a copy of the said book, or one of the said books, containing instructions:

Now therefore, in pursuance of the powers vested in them by provisions above recited, the Board of Trade hereby sanction a Book of Instructions, for dispensing the medicines and medical stores provided and kept on board ship, intituled 'The Ship Captain's Medical Guide,' price One Shilling and Three Pence, compiled by the late Harry Leach, M.R.C.P., and revised by William Spooner, L.R.C.P. London, M.R.C.S., and Medical Inspector of the Board of Trade.

Given under my hand and under the seal of the Board of Trade this 24th February, 1890.



GEORGE J. SWANSTON.

#### PREFACE

T0

#### THE NINTH EDITION.

This Edition has been revised throughout, and whilst the general plan of the late lamented author has been maintained, extensive additions and alterations have been made.

The chapter on the 'Prevention of Disease' has been entirely re-written, and an account of some Diseases not previously mentioned has been inserted; whilst the chapters on Medical Diseases have been partially re-written, and an endeavour made to bring the treatment up to the standard of the present day. Some new Drugs have also been added to the scale.

The Reviser is strongly of opinion that,

considering masters of ships may often be many months at sea, without the possibility of obtaining the assistance of a medical man; and may be obliged to treat serious accidents and diseases to the best of their ability, it is very important that they should obtain some practical knowledge, which cannot be derived from a book. They are, therefore, urged to attend a course of Ambulance lectures, which are now given in most large towns, and they may rest assured that the knowledge thus obtained, and the additional self-confidence they will feel when suddenly called upon in an emergency, will amply repay the trouble.

#### PREFACE

TO

#### THE SIXTH EDITION.

EXTENSIVE alterations and additions have been made in this edition of the 'Guide.' The Medical Director-General of the Navy has courteously granted the use of several plates published in the 'Medical and Surgical Handbook of the Royal Navy;' and some suggestions kindly given by Ship Masters and others have been gladly adopted. The Compiler offers to all many acknowledgments, and begs to direct the attention of readers to

short paragraphs on Fumigation, Disinfection, Ventilation, and the Public Health Act, which will, as it is hoped, still further aid the prevention of disease and the maintenance of health afloat.

#### PREFACE.

This work is written solely for the use of Masters and Mates of vessels at sea. It is confined strictly to a plain and brief description of accidents and diseases that occur on board ship; and much care has been taken to show, as clearly as possible, how these accidents and diseases can be best treated by a non-professional man. So little choice is given in the treatment of each malady, that the reader is urged to do absolutely all that is recommended, in the belief that no more than is here laid down can be accomplished safely without the assistance of a doctor. The chapters that treat of accidents and surgical diseases are, for the most part, the work of the late Dr. H. T. L. Rooke, Surgeon to the 'Dreadnought' Hospital Ship; and Dr. W. Dickson, R.N., Medical Inspector of Her Majesty's Customs, has given most valuable assistance in the work of revision. The Compiler begs to offer many acknowledgments for the aid that has been so courteously afforded to him, and commends this book to the earnest attention of commanders in the Mercantile Marine, hoping to receive from their experience suggestions that may tend to its completeness and consolidation.

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#### THE

#### SHIP CAPTAIN'S MEDICAL GUIDE.

#### GENERAL REMARKS.

ALL readers of this book will be agreed that the interests of owners as well as commanders of ships are most powerfully aided by sending every vessel to sea with a sound and healthy crew. Art has accomplished a great deal in diminishing the gross amount of manual labour now required on board ship, and steam, patent reefing topsails, improved running gear, and many other recent changes have done much in assisting to reduce the number of hands required to ensure all proper speed, and all possible precautionary means of safety. But, as no vessel can ever be entirely independent of her crew, it is eminently necessary that she should haul out of dock with a robust supply (as to quality) of hands; that, as far as is possible, the good men shall not be called upon to do the work of the sickly as well as their own; and that all on the articles shall have a chance of 'starting fair.'

It is believed that the 10th section of The Merchant Shipping Act of 1867 (extracts from which may be found at the end of this book) might, if faithfully carried out, do much to effect this very desirable object. All captains know to their cost the excessive inconvenience and serious losses that arise from shipping unhealthy men for a long voyage; men who, as soon as the ship is put to sea, present themselves aft with a bad rupture, a large ulcer, a big bubo, or a diseased heart, lay up for days, weeks, and months, give thereby additional labour to the rest of the watch, and eventually take money from the owners that they have in no wise earned. The adoption of this section of the Act will give a practical surety to the captain that his crew are in as good order as his spars and gear, to the crew that they will not be compelled to do more than a fair day's work for a fair day's wage, and to the owner that he will really get a fair day's work out of every hand shipped.

It is now a duty to tell the reader that the following pages are written with the object of showing not only what to do in cases of accident and sickness, but what to avoid. Doctors have lately learnt much on this head, and will tell you that in the practice of their own profession much harm may be done to the body by meddling and muddling. It is very im-

portant that this fact should be widely known, and so, acting thereupon, let the reader remember and apply the following rules:—

- (1) Follow out strictly all the recommendations enjoined in this book.
- (2) Do not take with you or use any medicines other than those inserted in the official scale.
- (3) When in doubt as to the nature of a disease, wait and watch.

Struggle hard and actively to prevent disease; but, when you are called upon to cure, adopt the directions given here, meagre as they may appear, and believe (as you may most assuredly do) that your own humble efforts to restore health and prolong life will receive safe and splendid backing from the wonderful hand of Nature.

#### PREVENTION OF DISEASE.

Many diseases are much more easily prevented than cured.

This is a fact that cannot be too forcibly impressed upon the minds of men who have the sole and entire charge of any community of human beings, ashore or afloat. The professional knowledge acquired by a doctor now very largely includes the art of prevention; and commanders of ships may be assured that this art can be acquired, in a great degree, by all who will take the trouble to observe how much the health of the body depends upon proper food, pure air, cleanliness of skin, and garments suited to the weather.

We will say a few words on each of these points.

FOOD.—Many diseases are induced by eating improper food. Man has been formed for a mixed diet of animal and vegetable food. This food must contain the elements necessary to sustain the body, and in their proper proportions; otherwise, either the body is imperfectly nourished on the one hand, or, on the other hand, an accumulation of useless matter takes place in the blood, which leads to the whole body becoming diseased. Too much animal

food, especially in hot climates, will injure the digestion, derange the liver, induce gout and rheumatism, and produce a feverish condition of the blood predisposing to many diseases. Scurvy is caused by a deficiency of the salts contained in vegetables, and mostly occurs when a monotonous salt diet, with no vegetables, is given for any length of time. It is to remedy this condition that lime-juice is issued, but with such a proper dietary scale as is now within the reach of all, lime-juice should not be required.

The quantity and description of food usually named in the dietary scales, and signed for by the crew, seem to be adopted as a matter of course from generation to generation, and are by no means such as to give the most suitable food to seamen. The food scale is a matter of contract settled between the master and seamen for each ship for each voyage, and is not in any way prescribed by the Merchant Shipping Act. A skeleton scale is printed in the articles of agreement, which provides for the insertion of other articles than salt beef and pork, biscuits, flour and peas, which form the usual monotonous diet, but too often the blank spaces remain blank. The old-fashioned scale is not sufficiently varied; it contains too much salt meat, too much animal food generally, and no vegetables. The Board of Trade have recently issued a circular on the subject, written by Mr. Thomas Gray, 'Dep. Paper,' No. 75, in which the following scale is suggested:---

Proposed VICTUALLING SCALE to be served out to the Crew per day, in addition to the issue of lime-juice (By Dr. Spooner.) and sugar required by law.

Coffee	oz. 1		-	-	1	1	<u> </u>	OZ.	
997100								1	
Tea	20 - 10						1 oz.		
Pickles	•	40z.							
gaeg		4 oz. per week.							
Molasses	, A	\$ pint per week.							
Raisira	٠	<b>д</b> ээ.	L IL	bc	q1			S oz.	
Irgus	oz.	07	77	67	CJ	07	7	1402	
Marma- lade		60k,	L IL	be:	'q[ ]			11b.	
Bice	oz.		1	4	1	1	7	S oz.	
Oatmeal	.zo	4	1	1	4			S 02.	
Butter	0Z.	-		ा		67	1	6 oz.	
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Beef	<u> </u>	-		1		-		0.21	
Flour	oz. S		S	S		S	$\infty$	2.8	
Discuit	oz.	12	19	12	15	12	12	.5.±	
		٠	•	•	•	•	•	-	
	ay.	lay	day	Vednesday	Thursday	· A	day	1 Man per week.	
	Sunday.	Monday	Tuesday	Wedn	Thur	Friday	Saturday	1 per	

# SUBSTITUTES.

Fresh potatoes, carrots, &c., 3½ lbs. per week, instead of preserved vegetables, as long as they last. Oatmeal may be substituted for rice in cold weather, and vice versa in hot weather. Fresh meat to be given instead of salt, and preserved as long as possible after leaving Port. Preserved onions may be substituted for preserved carrots. Since the issue of the above scale, some ship-owners have adopted it to their own advantage, and that of their sailors, whilst some others have adopted a scale of their own resembling it in essential points. If some such scale were universally adopted, and more especially if a good supply of fresh potatces were put on board on leaving England, and renewed at the different ports, the health of the crew would be very much improved, and scurvy eradicated.

Until then, this disease must be prevented as much as possible, by constant care in giving out lime-juice, in accordance with the Merchant Shipping Act, 1867, extracts from which may be found at the end of this book. Give a double allowance to any man who has spots on his skin from venereal disease.

A cup of hot tea or coffee should be given directly after turning out in the morning, and the same before turning in, particularly after exposure to severe weather.

A very useful drink, both for quenching thirst and giving endurance, is thin oatmeal and water with a little sugar. Put \( \frac{1}{4} \)lb. of oatmeal in two quarts of water, boil it well, and add one ounce of brown sugar. In summer drink this cold, and in winter hot—it will be found to be very sustaining.

Be particularly careful that the provisions shipped are of good quality. It sometimes happens that

casks of beef and pork which have been on the ship for twelve or eighteen months, and have become tainted, receive a fresh veneer of pickle, and are re-shipped for another voyage. Meat which has been only once pickled generally contains a certain amount of blood, which is apt to decompose in hot weather, and it is therefore important that all recently cured provisions, before being shipped for a long voyage, should be re-pickled. Casks of beef and pork should be always opened and re-pickled before starting on the homeward voyage. There is no doubt whatever that food in an incipient stage of decomposition is a very powerful agent in the development of disease—first of all diarrhoa, dysentery, or putrid fever will appear, to be afterwards followed by an attack of pure scurvy. This has frequently been noted by the medical inspectors of the Board of Trade when holding enquiries into outbreaks of scurvy.

WATER.—Many diseases are caused by drinking impure water. Diarrhœa and dysentery affect most severely the crews of ships lying at Calcutta, Hong-Kong, Bombay, Kurrachee, and Foo-Choo-Foo, and there is no doubt that its prevalence at these ports is due to the bad quality of the water used for drinking purposes. Pure water should be clear and tasteless, and without the faintest smell of any kind.

If it be at all muddy or brown-coloured, add a

little alum—about five grains to a gallon; this will render it clear and colourless.

If it smells or tastes at all foul, it will probably be due to putrefaction of organic matter. To purify it, add two or three drops of Condy's fluid to each gallon. Enough of the fluid should be added to give a faint pinkish tinge to the water. If there is any organic matter in the water, the colour of Condy's fluid is destroyed immediately.

By far the best means to purify water is by filtration, and a proper filter should be considered a necessary part of a ship's outfit. One of the best filters which has been devised is known as the tank filter, invented by Captain Crease, R.M.A. Water on board ship should be kept in iron tanks or in charred casks, otherwise it will soon become putrid. Some people imagine that rain-water is unfit to drink; this is a mistake. Rain-water falling from a pure atmosphere, and properly collected, is the safest that can be obtained for drinking purposes.

Cholera and typhoid fever are frequently spread through the agency of drinking water. If water is obtained from any locality where these diseases are prevalent, never drink it unless previously boiled; as boiling has the effect of destroying the germs of the disease. If possible, both boil and filter it. By attending to this golden rule, the liability of infection from these diseases will be much diminished.

PURE AIR is most important for the preservation

of health. All human beings are constantly destroying the purity of the air they breathe, by using up the oxygen and throwing off from their lungs carbonic acid. This carbonic acid is a deadly poison, and, if sufficiently concentrated, gives us, first, headaches, then causes drowsiness, and finally kills us. A certain animal effluvia is also given off from the lungs which is very injurious. If due provision is not made for the escape of these poisons, and the entrance of a corresponding amount of fresh air, serious consequences will ensue.

Typhus fever, which, from its former prevalence on board ship, received the name of ship fever, is especially apt to break out in overcrowded and illventilated ships.

Scrofula and consumption are frequently developed by breathing impure air, and the liability to scurvy is increased.

If any infectious diseases should break out, it is still more important that their poisons should be diluted and carried away by currents of fresh air, otherwise they will certainly spread from one person to another. It is far better to increase bed or body clothing than to shut out fresh or even cold air, and if you have to run the risk of catching fever or catching cold, choose the latter as the smaller evil.

Respired air, being warmer than fresh air, ascends towards the ceiling or deck, and means should be found to allow it to escape there. All forecastles and deck-houses should have one or two large serew ventilators, and they, as well as the skuttles, should be carried open in most latitudes, during the night as well as the day, whenever weather permits. The Merchant Shipping Act provides that every place occupied by seamen shall have twelve superficial feet of clear space for every adult, and that it shall be sufficiently ventilated. This amount of space is extremely small, and it is difficult to ventilate it properly without draughts. No doubt, it is only owing to the fact that so much of their time is spent in the open air that sailors preserve their health as well as they do.

CLEANLINESS of the ship is most necessary for the welfare of the crew. Before sailing, see that the between-decks, the hold, and the habitations of the crew are white-washed with quicklime. A vessel full of foul bilge-water is a floating cesspool; this therefore should be pumped out as often as possible and sea-water should be pumped in. Burnett's fluid is admirably adapted for purifying the bilge, and should be thrown in at the commencement of a voyage in the proportion of 25 lbs. to 50 gallons of water.

During the voyage, the forecastle, deck-houses, and galley should be thoroughly cleaned out once a week with water in which carbolic acid has been mixed in the proportion of a table-spoonful to each bucket (see page 94), or Sanitas, Condy's, or

Jeyes' disinfecting fluid may be used instead, according to the printed directions on the bottles.

It is no less important that the men themselves should be scrupulously clean both as to their persons and their clothes. Use your best endeavours to induce the crew to wash the whole of the body every day, and rub it well with a coarse towel. Dirty and uncleanly habits have a tendency to produce skindiseases and predispose to scurvy. Any clothing worn next to the skin should be frequently inspected and washed.

Take care that the crew are provided with suitable clothing. It is by no means uncommon to find men come on board with only one suit of under-clothing, which they wear from the beginning to the end of the voyage. Flannel should be worn next to the skin in all climates, to preserve the body from sudden changes of temperature, and thus guard against colds and rheumatism. Never let your men turn in in wet clothes, or dangerous consequences may ensue. A suit of oil-skins should be considered an absolute necessary. Dryness of the sleeping quarters is as essential as veutilation; see, therefore, that any leakage in the forecastle be at once attended to. This is a point often neglected.

PREVENTION OF CONTAGIOUS DISEASES, DISINFECTION, &c.—Especial precautions must be taken in the event of any contagious disease breaking out, or being likely to break out, on board ship.

Small-pox, typhus fever, yellow fever, scarlet fever, and measles are infectious; that is to say, they may be communicated from one person to another by means of the air, or by the clothing, or by personal contact. Cholera, typhoid fever, and probably dysentery, are contagious through the medium of the bowel discharges, and not by any other means.

If any such disease break out, see that the directions under the head of cleanliness are carried out every day.

If possible, at once separate the sick men from the rest of the crew. If no other place is available, put them in one of the boats protected by an awning.

Everything that passes from the sick men, upwards or downwards, must be thrown overboard immediately, and the utensils purified.

The hold and closets and all foul places must be mopped out frequently with one of the disinfecting fluids. Chloride of lime may be used for this purpose also, one pound to each gallon of water.

The bed and body clothes must either be burnt or disinfected in the following manner. Plunge them into boiling water with a little carbolic acid in it, and keep them there for two or three hours, then lay them out on the deck to dry.

The ship may be afterwards purified as follows: Put six to eight ounces of sulphur in a pipkin or earthen vessel and hang or place it over a bucket of water in the quarters that the sick men have occupied. Set it alight with one or two hot coals, close all ports, skuttles, hatches, and in fact every opening, and keep them closed for six hours. Then open out well, bring up on deck everything movable, and scrub decks, bulkheads, and all other woodwork thoroughly with carbolic acid water or chloride of lime mixed with water in the proportion already indicated.

When cholera is feared, ascertain every night and morning whether any of the crew have looseness of the bowels, and if so treat them as directed (page 63). Also pay strict attention to directions under the head of water (page 8). When a ship arrives off a port where any contagious disease is prevalent, let her be moored as far as possible from the shore, and let the crew have no more communication with it than is absolutely necessary. Avoid if possible taking in any water or provisions from this port. Give the quinine mixture (Receipt No. 9) every morning as a preventive, or in the case of cholera give ten drops of the clixir of vitriol in a little water, and do not on any account allow any unripe fruit or putrid food to be eaten.

Do all in your power to keep up the spirits of your crew, and by providing them with cheerful employment, prevent them from brooding over their own ailments. Fear is a most potent element in developing contagious disease.

DRUNKENNESS is a fruitful source of many diseases. Liver complaints, dysentery, dropsy, brain

fever, apoplexy, &c., may often be traced to this cause. Most ships now sail on teetotal principles, so that during the voyage there is no fear of this occurring. Whether in strict moderation, and at the proper times, alcoholic stimulants are useful as an article of diet, is a matter on which opinions differ, and which it will be unnecessary to discuss, but if they are entirely withdrawn, an extra allowance of coffee or cocoa should be given in their place. It is on shore, and more especially at foreign ports, that drunkenness is most likely to prevail, and the bad quality of the liquor sold is as much to blame as the quantity consumed. Do all that you can, by making the ship comfortable, to lessen the inducements to frequent those villanous haunts, where poisonous drinks and foul women speedily make your men utterly useless and burdensome to you and to themselves. Give your men the opportunity of obtaining good tobacco, and, if they wish it, good beer, on board, as well as any other extras they may wish to buy, and at ports where newspapers are published or sold, let them have copies without stint. No ship ought to be without a supply of good books; and draughts, chess, dominoes, and any rational amusements should be encouraged as much as possible.

Every ship is obliged to carry a certain amount of wine and brandy for medical comforts, and it must be borne in mind that these are intended solely for the use of the sick men, and must on no account (as is sometimes the case) be drunk in the cabin. Heavy penalties have been inflicted in several instances for neglecting this rule.

#### THE PUBLIC HEALTH ACT.

The Public Health Act of 1872 gave to the Government power to create Port Sanitary Authorities in England and Wales, and medical officers of health are now appointed at all ports, whose duties consist in preventing the importation of any contagious or infectious diseases into the kingdom by the shipping, and in looking after the health and accommodation of seamen and of all others living afloat while the vessel is in port.

It is the duty of the ship master on arrival to report to the officers of Customs any cases of sickness that exist, or any cases of sickness or death that have occurred during the voyage, to afford to the port medical officer all facilities for the sanitary inspection of the vessel, and to follow out strictly his directions in all matters affecting the health of crew and passengers, for by the terms of this Act ships are treated as houses when within the jurisdiction of a port sanitary authority.

Vessels cannot be detained for sanitary purposes at the entrances to British ports unless plague, cholera, or yellow fever exist on board. But any persons suffering from a contagious or infectious disease, and found on board any vessel in a British port, can and should be at once removed by the port medical officer of health to a proper hospital. This law applies to all vessels, whether inward or outward bound.

# ACCIDENTS.

### BANDAGES.

WHEN bandages are necessary, they should be put on very smoothly and evenly, with moderate pressure.



From 'The Medical and Surgical Handbook of the Royal Navy,' by permission of the Medical Director-General of the Navy.

The triangular bandage is simply a triangular piece of unbleached calico, and if not at hand, a large-sized pocket-handkerchief, folded from corner to corner, will answer the purpose. It is applied either folded like a neck-handkerchief, for the neck, eye, forehead, ear, cheek, or chin to fasten on pads or splints; or unfolded to form a sling, or to bandage any part of the body, as shown in diagram 1.

Roller bandages may be made from unbleached calico, flannel, linen, webbing, &c., and are used as supports to different parts of the body, as a means of applying pressure, for fixing splints, dressings, &c., and for allaying muscular action. In applying a roller bandage, the following simple rules should be observed:—

- (1) Bandage from below and work upwards.
- (2) Bandage from within outwards.
- (3) Avoid all wrinkles.
- (4) When the limb is of uniform thickness, apply the spiral bandage, each turn overlapping the preceding one to the extent of two-thirds of the width of the bandage.
- (5) When the limb thickens, use the reverse spiral, that is to say, the bandage is turned back upon itself each time it is carried round the limb (see page 31)
- (6) The joints use the figure of 8 bandage. To apply this carry the bandage over the upper part of the joint, then draw under and across the lower

part, and then up over the upper part again, thus forming a regular figure of 8 (see page 30).

Half an hour's practical instruction in bandaging will teach more than any lengthy description; obtain this if possible.

### WOUNDS.

A wounded person is most comfortably carried by being laid on a door, or some firm support. Have sufficient help at hand to lift him steadily.

Wounds may be clean-cut, ragged, pierced, poisoned, or caused by a gun-shot.

CLEAN-CUT WOUNDS, made by a sharp instrument, if not very deep or long, are not dangerous, though they may bleed freely.

Treatment.—Stop all bleeding (page 33). Cleanse the wound from dirt with warm water, bring the cut edges close to each other and keep them together by strapping, or by a fine needle and thread passed through the sides, and tied in a reef knot; over the cut surface place a pad of lint dipped in carbolic oil (Receipt No. 15), and fix it with a light bandage.

RAGGED WOUNDS.—In these cases the flesh is more or less torn, and the edges are jagged and unequal.

Treatment.—There is but little bleeding, and the edges being ragged and bruised, it is useless to bring them closely together. Apply lint dipped in the carbolic oil, and if the pain be great, warm fomen-

tations or poultices. Change the dressing as seldom as possible, and keep the injured part perfectly quiet by a carefully applied bandage. Continue the dressing of carbolic oil and the bandage till the wound is nearly healed. If it heal too slowly, a little basilicon ointment will hasten the process. If it heal too quickly and proud flesh form, touch the elevated portions with a stick of nitrate of silver or blue vitriol. N.B.—If you have no carbolic oil at hand, friar's balsam, or lint kept wet with cold water, may be used instead. If there be any foul smell, dust a little iodoform over the part.

PIERCED WOUNDS OR STABS.—These are much more dangerous than clean cuts, on account of their depth. Vital parts may be injured, the point of the weapon may break off and be left in the wound, and these wounds are very likely to be followed by inflammation, fever, and deep abscesses.

Interest.—At first, lint dipped in carbolic acid lotion (No. 14) should be applied and kept constantly wet. With this simple treatment the wound will occasionally heal. If, however, it throbs, and is hot and painful, matter is about to form. Hot poultices should then be applied, and changed frequently. If the patient be feverish, he must have a free purge, and then take the fever mixture three times a day (page Receipt No. 2).

Poisoned Wounds.—The most simple are those caused by stings of bees, wasps, hornets, and other insects.

Treatment.—Apply rags wetted with Goulard lotion (Receipt No. 12). Look for the sting, and, if found, pull it out directly.

SNAKE BITES.—The bites of some snakes (as that of the cobra) are fatal to life, and others are highly dangerous. To prevent the diffusion of the poison, bind the limb round tightly above the wound with an elastic tube or strap, or a handkerchief made tight by means of a stick twisted round it. Then, if the lips be not sore, suck it and apply lunar caustic, or a hot iron, to the wounded part.

Half a tea-spoonful of spirits of hartshorn given in a little water and administered frequently will counteract the depression, or brandy or other spirits may be given.

Gun-shot Wounds.—Bleeding from these wounds is the first evil to be remedied, and for this the same means are to be used as advised in the treatment under that heading (p. 32).

(1) Of the Head.—If the ball enter the brain, immediate death most always follows; but even when the brain is injured and the skull broken, the patient will, under proper care, sometimes recover.

He must be kept perfectly quiet; the bleeding from the scalp need not be stopped directly. The loss of some blood will do good, and generally, when he becomes faint, the bleeding will cease.

The after-treatment will be low diet, purgatives, and cold to the head. The diet must be low for a

fortnight at least, and on no account must any wine, beer, or spirits be given.

(2) Of the Chest.—The lungs may be wounded. In this case air and frothy blood often issue from the wound. The outward bleeding may be trifling, and the inward bleeding great.

Low diet only is to be given, consisting of toast and water, cold water, or a little beef-tea; and until the breathing is quite easy, he must live on slop food only. Lint dipped in carbolic oil should be placed over the wound, and a broad bandage must be passed tightly round the chest, so as to prevent as far as possible the movements of the ribs. He must lie on the wounded side.

(3) Of the Belly.—These are often fatal, as some vital part is generally wounded.

The patient must be placed on the wounded side, to allow the blood or other fluid to escape. Cold water, or toast and water only, should be taken, or he may suck ice or snow. An opium pill is to be given every four hours, until the patient becomes drowsy. The pills must then be left off until the drowsiness ceases, and again repeated. No opening medicine must on any account be given. Lint dipped in carbolic oil should be applied to the wound. If the bowels protrude, they must be gently returned and the wound closed by one or two stitches. A broad bandage must be applied, so as to exercise a steady pressure over the whole surface.

Wounds of Joints. These are serious injuries; and stiffness of the wounded parts, as well as severe pain and swelling, often follow. Wounds of the knee-joint are most common. The joint itself is known to be wounded when a clear yellowish fluid escapes, commonly called the joint oil.

Treatment.—A splint must be placed behind the injured joint, which should extend several inches above as well as below the joint, and be fitted with a pad. The wound must be closed at once by a piece of lint dipped in carbolic oil, which may be allowed to dry on and remain, and the limb must be kept quiet for three or four weeks.

# PUTTING OUT OF JOINTS, OR DISLOCATIONS.

The joints most likely to be put out at sea are:

- (1) Shoulder.
- (2) Elbow.
- (3) Fingers.
- (4) Hip.
- (5) Ankle.

These accidents are easily repaired if taken in hand at once.

In all injuries of this kind, compare the sound limb with that which is hurt.

(1) SHOULDER. — There is flattening of the shoulder; a hollow is seen where there should be a

rounded surface; the elbow sticks out from the side, and the patient often holds it with the other hand to ease the pain; there is often great pain and numbness of fingers, and if you put your hand into the man's arm-pit, a round hard lump is felt.

Treatment.—Put the patient on his back, take off your boot, press your heel well into the arm-pit, seize the patient's hand, pull steadily, and the bone



will slip into the socket with a loud snap. If the man be very muscular, a clove-hitch may be taken round the arm just above the elbow to aid a steady pull.

(2) Elbow.—The arm is bent more or less at an angle, and cannot be straightened, and the bones are both felt and seen sticking out at the back part of the joint.

Treatment.—The patient having been seated, one man must take hold of the middle of the upper half of his arm, and another of his wrist. They must pull against each other, and a third should

grasp the elbow with his two hands, his forefingers in front and his thumbs behind, with which he must press on the swelling downwards and forwards. After pulling some little time, bend the arm suddenly, and to the patient unexpectedly, and the bones will slip into their proper places.

Sometimes only one bone is out of place, which is thrown forwards, in which case the arm is slightly bent, but cannot be bent to a right angle, or completely straightened, and the palm of the hand is turned towards the body.

Treatment.—Pull in the same way as before indicated, and suddenly bend the elbow. The arm must be kept quiet in a sling for four or five days.

(3) FINGERS.—This injury is easily detected by the sticking out of the ends of the bones. It is repaired by fixing the displaced bone by a clove-hitch, and pulling steadily until the ends slip into place.

This accident must be repaired at once, or great difficulty will afterwards be found in its management.

(4) Thigh-Bone.—The injured limb is from  $1\frac{1}{2}$  to  $2\frac{1}{2}$  inches shorter than the other, and the toe points inwards. The foot cannot be turned out, and any attempt to do so gives great pain; great pain is also given in separating the legs.

Treatment.—Pulleys are often required to repair this accident. The patient must be laid on his back; the hip bones fixed by a stout piece of canvas passed between his legs and fastened to a staple in the deck, your heel pushed well up into the crutch, and a strong steady pull made by grasping the ankle with both hands. The repair may be assisted by placing a jack towel round the middle of the patient's thigh and round the neck of anyone who is helping you. Your assistant will then, by pulling gently, lift the head of the bone over the edge of the socket into its place. The bone will go in with a loud snap.

Note.—This accident is often difficult to discover, and you must therefore observe great caution in practising the above plan of treatment. If unsuccessful, do not persevere, but nurse the patient carefully until you arrive in port.

(5) ANKLE.—The lower end of the bone can be seen as a hard swelling, and felt against the skin on the inner side of the ankle; there is a hollow on the outer side, and the sole of the foot is turned upwards and outwards.

Treatment.—Pull steadily until the foot is straight. A splint must then be placed on the inner side of the leg reaching above the knee, and below the ankle.

# BROKEN BONES, OR FRACTURES.

These are of two classes, simple and compound.

A simple fracture is a broken bone with no

wound.

A fracture is said to be compound when a wound leads from the skin to the broken bone.

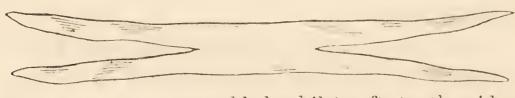
Broken Lower Jaw.—Usually caused by a direct blow.

Symptoms.—On taking hold of the jaw with two hands, the broken ends can be felt grating against each other, and the regular line of the teeth is destroyed. The patient dribbles from the mouth, and speaks in a mumbling manner.

Treatment.—A piece of millboard, gutta-percha, or coarse tarred felt, of this shape, is to be soaked in



hot water, wrapped quickly in a piece of rag, the centre part placed under the chin, and the ends





moulded, whilst soft, to the sides of the lower jaw. Each end of the splint should touch the lowest part of the ear, and, before soaking, it must be cut accordingly. It must be kept in its place by a four-tailed bandage (shown above), the two front tails being tied over the back and highest part of the head, in this way, and

the hinder ones in front of them. The patient must be fed on slop diet for a fortnight after the accident.

Broken Ribs.—A sharp stabbing pain on taking breath, the patient often complaining that his ribs grate together; he will sometimes spit blood. On placing your hand over the painful spot, the ends of the broken bone may often be felt.

Treatment.—A flannel roller, seven inches wide and seven yards long, must be tightly wound round the chest as high as the arms will permit.

GENERAL INDICATIONS OF BROKEN LIMBS.—Pain, inability to move the limb, and shortening, with grating of the broken ends.

General Treatment.—Gently bring the ends of the bones together and get the limb to its proper length and shape, then keep it fixed in that position by means of splints. If there is any shortening or deformity, one person must hold the broken limb above the seat of injury, whilst another must pull at the lower portion of it to extend the limb away from the trunk. No force must be used, or the simple fracture may be converted into a compound one.

Broken Collar-Bone.—The end of the bone is seen sticking up, the shoulder is flattened, and the patient cannot lift his arm to his head.

Treatment.—A bandage is to be applied round the shoulders thus (see page 30), a large pad of cotton must be put in the arm-pit, and the elbow pressed close to the side and supported in a sling.

Broken Upper Arm (between shoulder-joint and elbow-joint).—The patient cannot move his arm, and

there is deformity, with grating of

the ends of the bone.

Treatment.—Bend the elbow, put on four splints, one inside, one

outside, one in front, and one behind, support the arm in a sling, and let the elbow be allowed to drop. Instead of splints a plaster of Paris bandage may be applied as directed, and worn for four or five weeks.

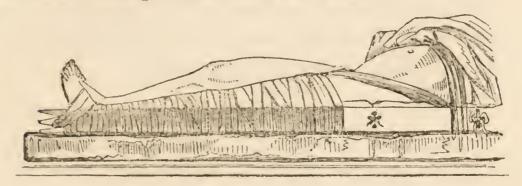
Broken Lower Arm (between elbow-joint and wrist-joint).—All ordinary signs of a broken bone.

Treatment.—Bend the elbow, apply one splint on the inside of the arm reaching from the elbow to the tips of the fingers, and one on the outside, reaching from the elbow to the back of the hand. The splints must be well padded.

Broken Thigh.—Shortening of the limb, turning out of the foot, with swelling of the foot, and grating of the broken ends of bone.

Treatment.—A well-padded long splint, extending from the arm-pit to the sole of the foot, is to be placed on the outside of the limb, the limb having been first straightened by steady pulling; the splint

must be fastened to the leg, thigh, and waist of the patient by leather straps, or by ordinary bandages. It must be kept on at least six weeks.



Broken Leg.—The same symptoms exist as in other ordinary fractures, viz grating of bones, pain, and swelling.

Treatment.—A splint must be placed on each side of the leg, reaching from above the knee to below the ankle, and fastened with bandages. The patient should generally be kept on his back, but the broken leg may, when carefully splintered and bandaged, be now and then laid on its side.

COMPOUND BROKEN BONES, OR FRACTURES.

Treatment.—If the bone sticks out of the wound, it must be put back, which can generally be done by steady pulling; but if the bone be jammed, it will be necessary to enlarge the wound with a lancet, and a piece of lint dipped in the blood should then be applied over the wound, and allowed to dry on. Two side splints, one on either side of the limb, must be applied, and the limb kept cool by a wet rag.

In the treatment of all fractures, rest is of very great importance, and the limb, when once set, should be disturbed as little as possible, unless the splints have shifted. All patients with broken bones should, if possible, be put into a sling cot, and all splints should be kept on for five weeks. (See page 114.)

N.B.—In simple fractures of the leg or arm a plaster of Paris bandage may be substituted for the ordinary splints after the first fortnight.

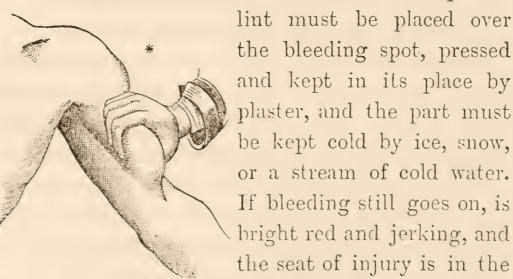
### BRUISES.

Bruises are too well known to need description, and need no treatment unless very severe.

Treatment.—Rags wetted with Goulard lotion (Receipt No. 12) should be applied, or hot fomentations used if cold is disagreeable.

### BLEEDING.

When bleeding from a wound occurs, you must act promptly, and with decision. The blood that flows from an artery is of a bright red colour, and that from a vein bluish, and dark. A firm pad of

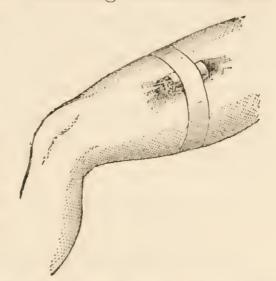


arm or leg, pressure must be made thus, over the

<sup>\*</sup> Extract from 'Rules' published by Dr. Packard of Philadelphia.

principal artery, which can be usually felt teating on the inside of the limb. A bandage must then be

fixed thus, placed on the spot where the artery feels to be nearest the surface, and tightened until the bleeding ceases. If a vein burst, or be cut, and if the injury be in the leg, the patient must at once lie down.



Bleeding from a vein is always easily stopped by the pressure of a pad. No pressure above the wound should be made in this case, as it will greatly increase the bleeding.

Directions for Making a Pad.—It should be about an inch thick, and made of several layers of lint or rag, of various sizes. The smallest piece is to be placed over the wound, from which the blood has been carefully wiped, and the rest in order of size. A piece of cork wrapped in lint is to be put on the top of the pad, and the whole arrangement fastened by a piece of plaster or a bandage.

If the wound be in the arm or leg, the limb must be raised to assist the return of blood.

A still simpler method of stopping bleeding from an artery is to tie an elastic band or tube tightly round the limb above the wound. Professor Esmarch has invented one having a hook at each end. It is called Esmarch's tourniquet, and is now carried in all ambulance carriages. To apply it, you simply stretch the tube to its full, and wind it round and round the limb, and then fasten the hooks to each other. It is very easily applied and requires no knowledge of the situation of the arteries. An india-rubber brace will answer the same purpose.

### GATHERING, OR ABSCESS.

This is generally caused by a blow or strain, and is a hot and painful swelling, at first hard, but eventually bursting, and discharging matter.

Treatment.—A linseed-meal poultice, which must be changed twice a day.

When the swelling softens, and the skin over it is red and very thin, time will be gained and suffering saved by opening it with a lancet. Continue the poultice after the abscess is opened. When the skin is very thick, as in the palm of the hand and over the fingers, it will separate, and should be cut away with a pair of scissors.

### BURNS. AND SCALDS.

Treatment.—In slight cases, a thick layer of flour should be dusted over the part, so as to form a crust, beneath which, if not very deep, the burn will heal.

In severe cases, pieces of rag should be dipped in oil, or, better, equal parts of oil and lime water (Carron oil), placed on the burn, and covered with cotton wool; the dressings must be changed as seldom as possible, but sufficiently often to ensure cleanliness, and must then be gently washed off with carbolic acid lotion (No. 14). The patient's strength must be supported by good food, and a daily allowance of grog, and the pain relieved by a draught at night containing forty drops of laudanum.

Burns of the face are best treated by painting on olive oil with a soft brush, or with a feather.

If large blisters form, they should be pricked with a needle and covered with flour and cotton wool. The wrinkled skin must not be cut off.

### INJURIES TO THE HEAD.

Common among sailors, and often of a serious nature.

Wounds of the scalp, even if small, may be followed by very awkward consequences; and, indeed, no injury of the head, however slight, should be neglected.

These wounds may be clean-cut or jagged, and in any case bleed freely.

Treatment.—Shave the part, clean the wound, and, if large, bring the edges together by one or two stitches. A pad of lint kept in its place by plaster is a sufficient covering, and the bleeding

is always easily stopped by pressure with fingers or bandage.

In all injuries of this kind the patient must be kept on *low* diet, and his bowels must be freely opened. If he complains of headache or is drowsy, cut his hair short, and put rags wetted with cold water on his scalp. No wine, beer, or spirits must on any account be given.

Concussion of the Brain.—This is a consequence of severe blows on the head or of falls from aloft, and the scalp is sometimes wounded.

The patient in a slight case is faint, feels sick, and sometimes vomits.

If the injury be severe, he loses his senses; his body is cold; he lies as if in a deep sleep, but can be roused by shouting some familiar question in his ear, when he will answer, and immediately go off to sleep again. This drowsiness may last from one to forty-eight hours.

Treatment.— Keep him quiet; give nothing, or you may choke him; wrap him in a warm blanket, and apply warmth to his feet.

Broken Skull and Pressure on the Brain.—Generally a fatal accident.

The patient is insensible, breathes as if smoking a pipe, and sometimes bleeds at the ear and nose.

Treatment.—Apply cold to the head and warmth to the feet. Nothing else can be done.

#### FROST BITE.

This accident occurs most commonly to coloured seamen, and affects the fingers and toes. Urge your men, when the ship is in cold latitudes, to come to you as soon as their extremities become red or at all shrunken.

Treatment.—Rub the parts affected with snow or ice, and afterwards apply rags wetted with cold water. Do not bring the patient into a warm cabin, or near a fire, or the limb may be destroyed.

#### HANGING.

Cut the patient down, make everything clear about the neck, and dash cold water on the face and chest. If necessary, employ directions given in the article on Drowning (see below).

### DROWNING.

Turn the body gently on the face with one of the arms under the forehead, in order that any water may escape from the mouth. Take off all clothes at once, wipe the body dry, and cleanse the mouth and nostrils with a handkerchief. Put hot bottles to the arm-pits, between the calves of the legs, and to the feet. To excite breathing, apply snuff or spirits of hartshorn to the nose, or tickle the throat with a feather. Rub the chest and face briskly with hot cloths, and dash hot and cold water alternately on them, or beat the chest with a wet towel.

Should these efforts not prove successful in the course of from two to five minutes, proceed to imitate breathing by Dr. Silvester's method, as follows, from National Lifeboat Institution:—

Place the patient on the back on a flat surface, inclined a little upwards from the feet; raise and support the head and shoulders on a small firm cushion or folded article of dress placed under the shoulder-blades.

Draw forward the patient's tongue, and keep it projecting beyond the lips; an elastic band over the tongue and under the chin will answer this purpose, or a piece of string or tape may be tied round them, or, by raising the lower jaw, the teeth may be made to retain the tongue in that position. Remove all tight clothing from about the neck and chest, especially the braces.

To Imitate the Movements of Breathing.—Standing at the patient's head, grasp the arms just above the elbows, and draw the arms gently and steadily upwards above the head, and keep them stretched upwards for two seconds. (By this means air is drawn into the lungs.) Then turn down the patient's arms, and press them gently and firmly for two seconds against the sides of the chest. (By this means air is pressed out of the lungs.)

Repeat these measures alternately, deliberately,

and perseveringly, about fifteen times in a minute, until a spontaneous effort to respire is perceived,



immediately upon which cease to imitate the movements of breathing, and proceed to *Induce Circulation and Warmth*.



The foregoing two Illustrations show the position of the Body during the employment of Dr. Silvester's Method of inducing Respiration.

The above treatment should be persevered in for some hours, as it is an erroneous opinion that persens are irrecoverable because life does not soon make its appearance, persons having been restored after persevering for many hours.

Cautions.—Prevent unnecessary crowding of persons round the body.

Avoid rough usage, and do not allow the body to remain on the back unless the tongue is secured.

Under no circumstances hold the body up by the feet.

When consciousness returns, give the patient light fluid food, with a little wine, and let him rest completely for at least twenty-four hours, or he may have a severe fever, and will then be confined to his berth for some weeks.

# CHOKING, OR SUFFOCATION.

Commonly caused by breathing foul air of any kind.

Bring the patient at once into fresh air, and treat him by the directions given under the heads of Hanging and Drowning.

If caused by pieces of food or a bone sticking in the throat, take hold of the nose with the left hand and keep the mouth open; then insert the first finger and thumb of the right over the tongue deep down into the mouth and try to remove the obstruction. If this does not succeed, press the chest and stomach against a table and give two or three smart blows on the back. This may remove it.

#### FAINTING.

This may occur from loss of blood, from fatigue, or from excessive weakness produced by any exhausting disease.

Treatment.—The patient must be laid down, with his head as low as the rest of the body. Give him plenty of air, sprinkle cold water smartly over his face and chest, and apply spirits of hartshorn to the nostrils. Give also a few tea-spoonfuls of weak brandy and water.

# POISONS.

Take care to find out what the patient has swallowed, as, in cases of poisoning, an improper remedy is far worse than none at all.

### ACIDS,

AS, SPIRIT OF SALTS, AQUA-FORTIS, SOLUTION OF CHLORIDE OF ZINC, &C.

Give bi-carbonate of soda in water, chalk or whiting in water, or, if neither of these be at hand, soap suds.

Give an ounce of castor oil afterwards to open the bowels, and repeat it the next day.

Note. - Carbolic Acid. - Give any kind of oil.

# POTASHES, HARTSHORN, AND AMMONIA.

Give vinegar and water. After-treatment the same as for acids.

### LEAD.

Give Epsom salts in double doses, which should be continued in doses sufficiently strong to keep the bowels freely open three days after all active symptoms of poisoning have passed away.

### OPIUM, OR LAUDANUM.

There is no antidote for this poison.

If the patient will swallow anything, give him 30 grains of sulphate of zinc in a large glass of water, make him drink large quantities of water, and tickle his throat with a feather, to make him vomit.

He must be kept awake at any cost, by splashing with cold water, and must be walked about until all symptoms of profound drowsiness have vanished. Give him strong coffee often, but in small quantities, keep him warm, and when he is thoroughly awakened let him have a short sleep of about thirty or forty minutes, then get the bowels open with a full dose  $(1\frac{1}{2} \text{ oz.})$  of castor oil, and keep up warmth of body, if necessary, by rubbing and hot bottles.

### ARSENIC.

If no vomiting has occurred, give the man 30 grains of sulphate of zinc in a large glass of water, or, if this be not close at hand, a large draught of very greasy water, or of warm sea water, and repeat it until he vomits. If this does not succeed quickly, the patient will probably die.

### FISH-POISONING.

This accident occurs now and then on board ship. Give your patient 30 grains of sulphate of zinc in a

large glass of water to make him vomit, and let him have afterwards small and oft-repeated doses of brandy.

### EXCESSIVE DRUNKENNESS.

Give the man 30 grains of sulphate of zinc in a glass of beer, or any other liquid, to make him vomit. Get everything clear about his neck and waist, rest his head, well raised, on a wet swab, and put him in the open air, properly protected from cold.

A simple method of exciting vomiting in all cases of poisoning is as follows:—

Get a piece of gutta-percha tubing half an inch in diameter; make the patient swallow 20 to 25 inches of it; raise the free end above his head, and by means of a funnel pour down a pint or so of water; then lower the free end below the level of the stomach, and the stomach will empty itself. Repeat this process several times. This remedy is very effectual and can be applied with the greatest ease.

# TAKE NOTICE.

In all cases of poisoning, your remedies should be found at once, and given speedily, with little or no special care as to the quantity administered, and you need not be surprised if the patient is unfit for work for several days after the occurrence.

## MEDICAL DISEASES.

The term 'slop diet' is used to signify any kind of food in a fluid state, as beef-tea, milk, arrowroot, &c.

#### FEVER.

By fever is not meant ague, but a continued state of hot skin, furred or dry tongue, with very loose or very confined bowels.

There are many varieties of fever, but these three may be distinguished without much difficulty:—

(1) SIMPLE FEVER.—This is a very mild form, and is caused by exposure to cold and wet, by sudden changes of temperature, or by some error of diet. Symptoms are heat of skin, quick pulse, loss of appetite, pains in the limbs, thirst and confined bowels. This state lasts from one to six days, and is often terminated by a profuse sweating which leaves the patient weak but otherwise well. It is not infectious.

Treatment.—Give your patient a black draught and the fever mixture (No. 2) three times a day, with slop diet. When the fever has left him, give the quinine mixture (No. 9) three times a day for a week.

(2) TYPHOID FEVER—sometimes called Enteric or

Gastric Fever—is generally caused by impure water or bad drainage. It commences much the same as simple fever, but there is more depression and the bowels are generally loose. About the seventh day, a few small rose-coloured spots will appear on the chest and belly, these fade away in a few days, and a fresh crop comes out. These spots appear for about three weeks. The tongue is moist and furred, but after a time becomes dry, red, and cracked, and the teeth are often covered with brown matter called sordes—there is great thirst. The diarrhea generally increases during the second week, and the stools are fluid, of a yellowish colour, and smell very offensive. In some cases there is blood in the stools. The belly is painful and often becomes tight like a drum. These symptoms continue during the third week, and the patient gets more exhausted and often lies in a state of stupor, muttering to himself and picking at the bed-clothes. The improvement is slow, and often does not commence till the fourth week, when the motions become firmer, the tongue moister, and the skin cooler. By the thirtieth day, in most cases, the fever is over, but the patient is left in a very weak state requiring great care. Sometimes death is caused by ulcers which burst in the bowels.

Treatment.—Remember, this fever will always last three weeks and cannot be cut short. Be careful to give no solid food, or you will kill the patient. If you can obtain it, there is nothing better than

milk-a pint and a half in the twenty-four hours, or condensed milk may be substituted in the proportion of about two ounces to a pint of water. This, with a pint and a half of beef-tea, will be a very suitable diet. If you have no milk, give any slop diet you can obtain. Give plenty of barley-water, toast and water, or cold weak tea to relieve the thirst. Stimulants are not generally necessary at first, but when the pulse begins to fail and the tongue gets dry and hard, give wine or brandy at the rate of 4 to 8 oz. in the twenty-four hours. Give also 6 grains of Dover's powder every night. If the stools are more than three or four in the day, give 20 grains of the diarrhœa powder two or three times a day as may be required. If the looseness is very bad (say from twelve to twenty stools in twenty-four hours), give the diarrhoea mixture (Receipt No. 3) every four hours. Should there be any blood in the motions, give twenty drops of tincture of steel in a little water every two hours till it stops. If there is much pain or distension of the bowels, put a large turpentine fomentation (Receipt No. 17) over the belly, keep it there for thirty minutes, and repeat it every morning as often as necessary. An opium pill may be given at night when there is much restlessness. When the fever is over, give the quinine mixture (Receipt No. 9) three times a day. No solid food must be allowed for six weeks from the commencement of the attack. Good nursing is of more value than

medicine in this disease. Typhoid fever is only contagious by means of the stools; take care to throw them away, and pay strict attention to directions under the head of Prevention of Disease, especially as regards the water (page 8).

Typhus Fever.—Used to be considered the same as typhoid, but it is different. It is important to remember the difference between them, as typhus fever is very infectious, while typhoid fever is not. It is caused by over-crowding, bad ventilation, insufficient food, &c., and has been called gaol, camp, and ship fever, because it used to be common in these places. It begins with headache and sickness. Then the usual symptoms of fever set in, and the patient will be heavy, stupid-looking, and confused in his mind. The bowels are confined, the tongue becomes dry and hard and covered with a brown or black crust. About the fifth day a rash of purplecoloured spots comes out in front of the body in patches, and these last till the fever is over. At the end of the first week the patient will become light-headed and very prostrate, and if no improvement takes place will become insensible. The crisis or turn occurs about the fourteenth day, and if favourable, he will fall into a sound sleep and a gentle perspiration will break out over the body. Inflammation of the lungs very often comes on during this fever. The chief differences between typhus and typhoid fever are: in typhus the brain and head

are chiefly affected, in typhoid the stomach and bowels; in typhus the spots are of a purple colour, are more numerous, and come out in a single crop which lasts till the end—in typhoid they are of a rose-red colour, come out in successive crops which last only a few days, and disappear on pressure. Typhus fever lasts only fourteen days, typhoid never less than three weeks.

Treatment.—At once remove the patient from his shipmates and place him in a cool well-ventilated place. Shave the head and apply cold spirit lotions. Get the bowels well open with a dose of castor oil, and keep them open regularly with an occasional rhubarb pill. Give very good nourishing slop-food, and at the end of the first week give 6 oz. of brandy in the twenty-four hours, increasing it to 12 oz. if the pulse is very weak; but when the tongue becomes soft and less dry, you may knock off half the brandy. Give lemon or lime-juice freely to relieve the thirst, in the proportion of about two ounces to a pint of water, and the stimulant mixture (Receipt No. 8) every four hours. If patient is very restless, a dose of the soothing mixture (Receipt No. 4) may be given occasionally at night. Should inflammation of the lungs come on, apply mustard poultices or turpentine fomentations to the chest. During convalescence give the quinine mixture (Receipt No. 9) three times a day. Use disinfectants and free ventilation all over the ship.

In both these fevers, see that the patient makes water; and if he does not do so, use the catheter very gently every twelve hours. Also keep him clean and dry, and sponge the skin over the rump and hips with weak brandy and water to avoid bed-sores.

### AGUE, OR INTERMITTENT FEVER.

This disease, in one form or other, occurs chiefly in China, the West Indies, and on the west coast of Africa. It is caused by breathing the air rising from marshy grounds, which contains a poison termed Malaria. A violent chill, followed by great heat, the whole attack lasting from two to eight hours, are sufficiently distinct symptoms; and two things are to be done before you can commence any satisfactory treatment—1st. See that the bowels are well opened with a dose of black draught; 2ndly. Find out as exactly as possible the hour at which the chill fit usually begins.

This will, with some care, be almost always ascertained. Having succeeded in fixing the time, give your patient 10 grains of quinine in a little water and a few drops of elixir of vitriol, two hours before the expected attack. Repeat this twice, and, if unsuccessful in stopping the fit, or lessening its severity, increase the dose to 15 grains. Having stopped the chill fit completely, keep up this large dose three

times afterwards, two hours before the expected attack, and give the man, besides these large doses, 3 grains of quinine three times a day, making him take this last prescription at least a week after all signs of the disease have passed away.

### REMITTENT FEVER.

This is something like 'Ague, and, like it, is due to malaria. It differs from Ague in the symptoms not going off entirely before another attack begins. A variety of this fever, very prevalent in the West Indian Islands and the southern parts of India, is called Dandy, and sometimes Jungle Fever, and is characterised by a dry and hot skin, great pain in the head, loins, and all the joints, and an intense aching in the eyelids. These symptoms last about twenty-four hours, when they subside, and perspiration breaks out. In about two days' time, however, they come on again and will recur at irregular intervals.

Treatment.—Open the bowels well with a dose of jalap, and give 4 grs. of quinine every four hours. In all places where these malarious fevers are prevalent, avoid sleeping on shore if possible, live well, and let the quinine mixture (Receipt No. 9) be taken night and morning as a preventive.

### SMALL-POX.

Commences with shivering, feverishness, sickness, and pain in the back. On the third day, the

eruption comes out, and is always first noticed on the forehead. Small pimples appear on the face, then on the neck, arms, body, and legs. At first, they feel like shot under the skin. On the sixth day, a little matter forms on the top of each pimple, which is sunken in the centre. On the eighth day, the pustules are mature, and in a few more days begin to break and form scabs. Before they break, the face swells, and a flow of thick spittle comes from the mouth; the throat is often swollen and there is some difficulty in swallowing. These symptoms disappear when the pustules break, but there is often a return of the fever, and in some cases this is a period of some danger. The scabs fall off about the twelfth day and often leave pock-marks on the face. On the seventeenth day the patient is well.

The severity of the disease depends principally on whether the patient has been properly vaccinated. If so, and more especially if he has been re-vaccinated, the chances are, that if he gets small-pox at all, it will be very slight, and appear in what is called the modified form. When the disease is prevalent, masters of ships should insist on their crew being re-vaccinated when it can possibly be done—this is the only safeguard.

Treatment.—When the symptoms first appear, keep the bowels open gently with an occasional dose of salts, and give the fever-mixture (Receipt No. 2) three times a day. When the eruption is well out,

leave off the opening medicine, keep up the patient with good slop diet, and give cooling drinks such as lemon-juice and water. If the strength fail, give wine or brandy. When the itching is very trouble-some, and causes wakefulness, give an opium pill every night while it lasts. To prevent pitting, smear the face with olive oil, or oil and lime-water, and keep him in a dark room. During convalescence give the quinine mixture three times a day, and good nourishment.

#### SCARLET-FEVER.

May attack adults if they have not had it in childhood. It comes on with the ordinary symptoms of fever, to which is added sore-throat. The rash appears on the second day, first on the neck and upper part of the chest, then on the face and trunk, and lastly over the arms and legs. When fully out, the whole skin is of a bright scarlet tint. The rash remains out for three or four days, then gradually fades, and the skin peels off in scurf or large flakes. The tongue is at first covered with a white fur, which comes off leaving it a bright red. The throat is red and swollen and in bad cases becomes ulcerated with an offensive discharge. When the fever is over, it often happens that inflammation of the kidneys and dropsy come on.

Treatment.—In slight cases all that is needed is to keep the patient in a well-ventilated room, give

slop diet, cooling drinks, such as weak lemon-juice and water, and the fever mixture (Receipt No. 2) three times a day. If you can obtain it, one drachm of chlorate of potash dissolved in a pint of water makes an excellent drink, which relieves the soreness of the throat. If the throat symptoms are bad, keep on a linseed-meal poultice, and gargle or swab out the back of the throat with weak Condy's fluid, a tea-spoonful to half-a-pint of water. If great weakness should come on, keep up the strength with beef-tea, and give from six to eight ounces of port wine every day. Also give the quinine mixture (Receipt No. 9) instead of the fever mixture. For the dropsy that sometimes follows scarlet-fever, keep the bowels open with cream of tartar every morning, and give 15 drops of tincture of steel three times a day in a little water. Scarlet fever is very infectious, and the most dangerous time is when the skin is peeling. To guard against this, rub the patient's body all over with carbolic oil (Receipt No. 15), and be very careful to disinfect the clothes and fumigate the room that has been occupied (page 13).

## MEASLES.

Is not very likely to occur among men. It commences with sneezing, snuffling, and running of the eyes, followed by the appearance of a raspberrycoloured rash in blotches or half-circles, which commences on the face, then spreads over the body. It lasts from six to ten days.

Treatment.—Keep the bowels moderately open, and give the fever mixture (Receipt No. 2) three times a day with slop diet. Should inflammation of the lungs come on, treat as directed (page 58).

#### ERYSIPELAS.

Is known by an intensely red and shining condition of the skin, which begins by a single spot, which extends very rapidly, produces much swelling, and (except when following wounds) nearly always appears on the face, scalp, or legs. It may come on without any apparent cause, but often starts from some wound or injury, if the person is in a bad state of health, or living in an unhealthy atmosphere. In slight cases it disappears in a few days, but in severe cases blisters will appear on the affected part, and matter form beneath the skin. When this is the case it will be accompanied by a good deal of low fever.

Treatment.—Wrap up the part affected in cotton-wool, or powder it well from the cook's dredging-box, to keep out the air as much as possible. If matter form, the part must be poulticed and when ripe opened with a lancet (see Abscess, page 34). Give at first a dose of jalap, or a blue pill followed by a black draught, to open the bowels, and then

administer 20 drops of tincture of steel in a little water, three times a day. Should great weakness come on, keep the patient up with beef-tea, wine, or brandy as may be required. Allow nothing but slop diet. Erysipelas is not contagious to persons in good health, but is liable to spread to others suffering from wounds of any kind.

## YELLOW FEVER.

This disease exists only in countries where the temperature reaches at least 75 degrees Fahr. It occurs chiefly in the West Indies, in those parts of the Americas bordering on the Gulf of Mexico, on the west coast of Africa, and sometimes in Spain.

Its chief symptoms are well known to all who have frequented the coasts above mentioned, and are yellowness of the skin, intense fever, and the vomiting of a dark brown fluid.

This disease lasts from ten to thirty days, and if the patient survives to the fifth day, the case is generally hopeful. Get the bowels open as speedily and as thoroughly as possible with full doses of castor oil. Shave the head, and apply cold to it constantly. Sponge the body with cold water if the heat of skin continue; but if the patient becomes cold, as is sometimes the case, put him into a warm bath at a temperature of 90 degrees.

Give the fever mixture (No. 2) three times a

day, and if he is excessively restless, an opium pill at night, with very good slop diet at frequent intervals both night and day.

Keep him very clean; see that he makes water regularly, and use the catheter if necessary (page 85).

When the heat of skin and other serious symptoms have passed away, let his rations be as good and liberal as possible, with a daily allowance of wine or beer, and give him 3 grains of quinine three times a day for a fortnight.

# COUGH, BRONCHITIS, INFLAMMATION OF THE LUNGS, AND CONSUMPTION.

- (1) A severe cough, with a variable quantity of frothy, white, and sometimes mattery expectoration, will generally indicate bronchitis, which lasts from five to ten days.
- (2) A cough, with a small quantity of rusty or bloody expectoration, much heat of skin, and difficulty of breathing, will generally indicate inflammation of the lungs, which lasts from four to nine days.
- (3) A lasting cough, with much mattery and often bad-smelling expectoration, often accompanied by occasional attacks of blood-spitting, as well as by loss of flesh and debility, will indicate consumption.

- (1) For the first of these (Bronchitis) commence by opening the bowels with a dose of jalap or some other aperient; put mustard poultices to the chest and give the cough mixture (Receipt No. 7) every four hours. When the cough gets looser and there is a good deal of expectoration, add 2 drachms of spirits of hartshorn to the six-ounce bottle of the cough mixture, and give it as before. During convalescence give the quinine mixture three times a day. A troublesome cold may often be cut short by making the man turn in, and giving him 20 drops of laudanum and 20 drops of sweet spirits of nitre, in a glass of hot grog. For winter coughs of a chronic nature, there is nothing better than thirty drops of Friar's balsam given in a little gruel three times a day, or the following may be substituted. Take 2 drachms of elixir of vitriol, half an ounce of paregoric, and one ounce of treacle, put them in a six-ounce bottle and fill up with water; the dose will be one tablespoonful three or four times a day.
- (2) For the second (INFLAMMATION OF THE LUNGS) pursue the same course as for the first, but should signs of weakness come on, leave off the cough mixture, and give the stimulant mixture (Receipt No. 8) every three hours. Give also 4 to 6 oz. of brandy in the twenty-four hours, till the spitting ceases to be rusty, and the skin to be hot. Keep the chest covered with linseed-meal poultices, and if

he can get no sleep at night, give a dose of the soothing mixture (Receipt No. 4).

(3) For the third (Consumption) relieve the cough by giving a table-spoonful of the mixture prescribed above for winter coughs, occasionally. Rub in some turpentine liniment under the collarbones, or apply mustard poultices should there be any pain. Let him have as a tonic the quinine mixture three times a day. If he should bring up blood in considerable quantities, give 20 drops of the tincture of steel every three hours whilst it continues, and allow nothing but cold drinks. The diet must be as nutritious as possible, and at the first opportunity cod-liver oil must be obtained and a table-spoonful given three times a day. The chest must be well protected with flannel.

## QUINSY.

A swelling of one or both tonsils (which are small round lumps at the back of the throat) is a sufficient explanation of this disease, which is often very alarming and very distressing to the patient, but rarely fatal.

It lasts from five to ten days.

Get the bowels open, and make him gargle continually with warm water; and breathe the steam of hot water from a jug, a handkerchief being thrown loosely over the head to keep in the steam. Wrap

up the throat with flannel and give the quinine mixture (Receipt No. 9) three times a day. After much pain, and apparent danger of suffocation, the swelling will burst, and the man will speedily get well.

## HEART DISEASES.

Heart diseases are mostly difficult to discover. The general symptoms are shortness of breath, with or without cough, pain about the left nipple, with palpitation, and a swelling of the legs, purse, and body, commonly called dropsy. (Dropsy, however, often exists in diseases of the liver and of the kidneys.)

If there is much pain, put a hot fomentation on the chest, and if the dropsy increases, get the bowels freely open with a dose of 20 grains of jalap and 10 grains of cream of tartar, repeating this every third day for about fourteen days, if it does not appear to weaken the patient. Opium must not be given in these cases to procure sleep, and very little can be done, as nearly all varieties of heart disease are incurable.

If any spitting of blood occur, nothing warm must be taken.

## JAUNDICE AND LIVER DISEASES.

Jaundice, like cough and diarrhea, is only a sign of disease; and as a cough shows that something is wrong with the lungs, and diarrhea points to cholera, fever, or dysentery, so jaundice shows that the liver is out of order.

Yellowness of the skin and of the eyes is a sufficient indication of jaundice, which may accompany any form of liver disease.

These forms of disease are so various and intricate that a detailed description of them would be confusing and useless. You must therefore treat symptoms.

In all cases give one of the strong or mild purging pills, and half a blue pill, every night for four nights running. If there be much pain over the liver, put on a turpentine fomentation (Receipt No. 17) once or twice only, and, if the pain be intensely severe and come on suddenly, give an opium pill, but do not repeat it unless absolutely necessary.

Most disorders of the liver are known by a pain in the right shoulder, a dull aching on the right side, sluggishness of the bowels, and excessive general weakness.

Some forms of liver disease are caused by drinking, some by dysentery, and some by the passage of a gallstone; but you cannot do more than that above indicated, and you will find, after reaching temperate latitudes, that the patient will generally improve.

## CONSTIPATION.

An obstinate confinement of the bowels is often aggravated rather than relieved by the use of purgatives. Give two compound rhubarb pills every

other night for a week; if this does not succeed, an injection up the vent of soap and water, or weigh out 80 grains of soap, knead it well, and tell the patient to pass it cautiously into the vent. Ask every man who complains of constipation if he has a rupture, and, if this be the case, treat him immediately as directed in this book (see page 83). Do not persevere with purgatives if the above directions fail; give any sorts of fruit (fresh or preserved) if you have them on board, tell the patient to take a cold bath every morning, and leave the rest to nature.

## INDIGESTION.

This is a very common complaint among sailors, who will come aft complaining of wind on the stomach and pain about the belly after meals. Give the stomachic mixture (Receipt No. 6) twice a day, and a mild purging pill, if necessary, for three nights in succession.

## DIARRHŒA.

Sailors are often attacked with simple looseness of the bowels, but when an illness begins in this way, look out for fever (as described in page 48), dysentery (page 65), or cholera (page 63). If you cannot satisfy yourself that the looseness is a symptom of any of these diseases, and you believe that the diarrhæa arises from something injurious that has

been swallowed by the patient, let it go on for some hours, and put your patient on slop diet. But if it continue beyond four or five hours, give him a dose of the diarrhœa powder after every loose motion, and he will soon get well.

Should this not check it after three or four doses, give the diarrhea mixture (Receipt No 3) every three or four hours.

## CHOLERA.

This disease generally commences with simple diarrhea, which may go on from two to eight days. If neglected, agonising cramps, stools resembling rice-water, vomiting, and a general blueness of the body follow.

This stage lasts from two to forty-eight hours.

If the patient survive it, he will either improve very rapidly, or will have an attack of fever, with hot skin, white furred tongue, and great general weakness.

This stage lasts from two to seven days.

It cannot be too forcibly impressed upon your mind that no good can be done unless you treat a case in the first stage, and so I repeat a warning before mentioned (page 14), that you should urge upon all your men to come aft as soon as any looseness of the bowels begins. Give them the diarrhea mixture (No. 3) after every loose motion, and, above all, let them have as much rest as you can.

If the disease is not checked by these means but goes on to the second stage, viz. rice-water stools and cramps, the best thing to administer will be spirits of camphor. This may be prepared by dissolving two ounces of camphor in half a pint of whisky, brandy, or any spirit. Give five drops of this with a table-spoonful of hot brandy and water, every quarter of an hour, and it will often have a good result. At the same time apply a large mustard poultice to the stomach and belly, put hot water bottles or bags of salt to the feet, and well rub the limbs to relieve the cramps. If you can possibly procure it, let ice be sucked to relieve the thirst, if not, cold water must be given.

Throw overboard immediately all stools passed, and if possible all soiled clothes, and wash out the quarters where the patient is berthed frequently with carbolic-acid water or chloride of lime. When cholera is present, or when it is feared, pay strict attention to the directions given under the head of 'Prevention of Contagious Diseases' (page 12) and you will in most cases prevent it from spreading.

## DYSENTERY.

This disease is almost entirely confined to the crews of ships trading to China and the East Indies; sometimes, but much more rarely, it occurs in ships coming from the West Indies, west coast of Africa,

South America, and some of the Mediterranean ports, particularly Alexandria and Odessa.

The symptoms are well known to most captains:—

Looseness of the bowels, with much straining, stools more or less bloody, resulting in great general weakness.

In nine-tenths of the cases that occur in East India and China ships, the sailors will tell you that they had dysentery in the country before sailing, and this probably for some weeks. If such a history be made out satisfactorily, you must let your patient have as much rest as possible, give him slop diet, continue his lime-juice, let him have 10 grains of Dover's powder three times a day, 10 drops of laudanum in an ounce of castor oil every third day, and plenty of warmth to the body. Leave off the limejuice at the end of a week for a few days only, if it appears to aggravate the disease, but under no other circumstances. This is the only useful treatment for such cases in the tropical seas; you will find that, when temperate latitudes are reached, your patient will almost invariably improve; and you may then give him 2 grains of quinine three times a day for several weeks. Arrowroot, sago, flour, rice, or any other light extras that you may have, are always well expended on such cases. If, however, you are perfectly satisfied that the disease has commenced for the first time in a man after the ship has put to

sea, pursue the same directions as to diet, knock off all his lime-juice, and, instead of Dover's powder, give 5 grains of ipecacuanha powder three times a day, gradually increasing the dose to 10 or 15 grains if no vomiting occur. If your patient does not improve under this treatment, give him his lime-juice again, and pursue the same plan as that first recommended. It must be recollected, however, that in India and China very few cases of dysentery commence after leaving port, the vast majority being cases where the disease has begun during the sailor's stay in the country.

No other patients that may come under your care will so well repay all possible indulgence that you can give them in the matter of rest when ill, and easy deck work when improving.

## COLIC.

This disease frequently occurs among seamen and others from no very obvious cause, and also after drinking water that has passed through leaden pipes, or has been kept in leaden vessels; or more often breaks out among a ship's crew after working at any occupation in which white or red lead is used. It begins with severe twisting pains about the belly, which is not tender on pressure. The pains commence suddenly, and come on again at irregular intervals, with great confinement of the bowels.

Look for a narrow blue line along the edge of the gums, which, if found, is at once a proof that lead is the cause of the disease. It is probable that several of the crew will be affected at the same time. If this be the case, and you are using white or any other kind of lead in painting or repairing the ship, leave off the work as soon as is practicable. Give your patients a good dose of castor oil with 10 drops of laudanum, put them on slop diet, and make them wash themselves and their clothes thoroughly. When the bowels have acted well, give them a dose of salts and nitrate of potash, with essence of ginger, twice a day, and, if the pain continue, put on their stomachs a large hot fomentation, repeating this until the pain abates. This treatment, with entire absence from all work in which lead is used, must be continued until the bowels are regular and the patient free from pain, or palsy of the hands may follow, and the men will then be entirely useless to you for the rest of the voyage.

If any signs of palsy should appear, give 5 grains of iodide of potassium three times a day, and continue this for some weeks.

## INFLAMMATION OF THE BOWELS.

This disease, which is very dangerous, may be produced by cold and wet, by injury to the belly, by rupture (page 83), or by too much purgative medicine.

It is very important to distinguish it from the last disease (Colic), as the treatment must be very different. It begins with a shivering fit; it is accompanied with a good deal of fever; in colic there is no fever. There is great and constant pain in the belly, which is much increased by pressure; in colic the pain is variable and is often relieved by pressure. There is frequent vomiting, and the bowels may be confined or the reverse; in colic there is no vomiting, and always obstinate constipation.

Treatment.—Be very careful to give no purgative medicine. If you have them, apply leeches to the belly, if not, put on light linseed-meal poultices or turpentine stupes. The bowels may be moved by a large injection of warm water, about two quarts, gently administered; an opium pill may be given every four hours, and the sickness relieved by effervescing drinks of lime-juice and water with a tea-spoonful of carbonate of soda in it. When the pain and tenderness are gone a dose of castor oil may be given—not before.

## KIDNEY DISEASES.

These maladies are difficult to detect, and their symptoms by no means easy to describe.

Pain in the loins, great general depression, and (as with heart disease) great general dropsy, are the chief and only marked signs.

If the patient be tolerably strong, keep the bowels very freely open for fourteen days by giving a dose of 20 grains of jalap and 10 grains of cream of tartar every other morning. At the same time apply hot fomentations to the loins, and as he begins to improve give 15 drops of tincture of steel three times a day. Should the swelling not be reduced, or the pain relieved, by this treatment, you can do nothing more to aid strength except by feeding the man tolerably well.

Heart and kidney affections are the most hopeless kinds of internal diseases, and in the vast majority of cases your patients will be fit for no more active work than sailmaking, cleaning brass-work, quarter-master's duty, or giving a hand to the cook.

## FITS.

Fits commonly so-called are chiefly of two kinds, Apoplexy and Epilepsy.

APOPLEXY, or Stroke, is the result of fulness of the blood, and mostly occurs in stout short-necked persons. It comes on suddenly, the patient will fall down as if shot, the face at first flushed becomes livid, the pulse is full and slow, and the breathing snoring. If he recovers, it will be generally found that he has lost the use of one side of the body.

Treatment.—Place the body in a lying-down position with the head raised. Undo clothing round

neck. Apply cold to the head, and mustard plasters to the feet and calves of the legs. Use an injection up the vent of an ounce of turpentine with a pint of warm gruel. When consciousness is restored give him half a drachm of jalap. Let the diet be light, and allow no stimulants of any kind.

EPILEPSY, the Falling Sickness.—Patient utters a peculiar cry and falls down in convulsions. His whole body works and twists with such violence that it requires two or three strong men to restrain him. He foams at the mouth, his hands are clenched, his breathing is suspended, face is distorted and livid; he bites his tongue, and for the moment appears at the point of death. In a short time the convulsions cease, and he awakes heavy and stupid with no recollection of what has taken place. The only thing to do during the attack is to raise the head, loosen the neckerchief, throw cold water on the face, and prevent him from injuring himself. Put a piece of soft wood or a handkerchief between his teeth to prevent his tongue from being bitten. The best medicine to give to prevent a return of the attack is the bromide of potassium; this may be given in doses of 15 grains dissolved in water, three times a day, and must be continued for some weeks to do any good. No one liable to epilepsy should go to sea.

## SUNSTROKE.

Occurs usually in the East and West Indies, and is caused by continued exposure to the sun. It may commence in two ways: (1) with giddiness, drowsiness, intense headache, hot dry skin, and sometimes purging and vomiting, followed by insensibility with 'snoring' or 'snorting' breathing; or, (2) sudden loss of consciousness, with 'snorting' breathing and convulsions. Its course in both cases is rapid, vomiting is a bad sign, and it may prove fatal in from twenty minutes to twelve hours; but, if not fatal, will run its course in from five to eight days.

Send your patient at once into the coolest place that you can find, get his head shaved, pour cold water over the head, and dash it smartly and frequently over the head, neck, and chest; and if he can swallow, give an ounce of castor oil immediately, repeating the dose, until the bowels are freely and thoroughly relieved, four or five times; keep him quiet and on slop diet, and, after he returns to duty, see that his head is always covered when on deck.

## PALSY.

Loss of power in arms, legs, bladder, and, in fact, any part of the body, occurring as a consequence of many other diseases.

You can do nothing by active medicine, but it is

your duty to see that the patient is kept as clean as possible, so as to avoid bedsores; that his bowels are regularly relieved, and that his food is good. No stimulants are necessary. Ask him if he passes urine regularly. If none passes for twenty hours, and a warm bath fails to relieve him, you must use the catheter (page 85), taking care to pull out the wire before introducing the instrument into the yard.

## DELIRIUM TREMENS.

This disease is caused by excessive drinking. It is characterised by inability to sleep, want of appetite, great restlessness and delirium of various kinds. The patient imagines he sees all kinds of horrible things; cats, toads, devils, &c.; he is always looking out for imaginary enemies, and talks incessantly. His whole body trembles, his eyes are wild, face pale, pulse small and quick. There is usually no headache, and the skin and tongue are moist. The disease is not often fatal, and if a refreshing sleep can be obtained recovery soon ensues.

Treatment.—The first thing is to get a free action of the bowels. Give a large black draught, and repeat it in six hours if necessary. The next thing is to procure sleep. For this purpose there is nothing better than the bromide of potassium; give 20 grains dissolved in water every two hours, and it will in most cases have the desired effect after a few doses;

it is far safer than opium. If it should not succeed, and if the man is very violent, an opium pill may be given at night and repeated in two hours if necessary. Keep up the strength with beef-tea or soups given at short intervals, and allow a few ounces of wine or brandy per day. Keep a constant watch or he may commit suicide.

## INFLAMMATION OF THE BRAIN.

May be brought on by injuries to the head, by exposure to the sun, or by over-excitement. It is necessary to distinguish it from delirium tremens, as the treatment is not the same. There is always severe headache and extreme sensibility to light. The pulse is quick and hard, the tongue dry and parched, the face flushed and the skin hot and dry (compare delirium tremens). The delirium is often violent, and sometimes convulsions occur. This state will continue from twelve to forty-eight hours, and, if not relieved, the patient will fall into a state of stupor and die.

Treatment.—Keep patient absolutely quiet and away from the light. Shave the head and apply cold brandy and water to it; put the feet in mustard and water. Get the bowels open at once by 30 grains of jalap followed by a strong black draught. Give nothing but slop diet and no stimulants at first. Should signs of sinking come on, put a mustard

plaster to the nape of the neck, and give the stimulant mixture (Receipt No. 8) every hour or two with small quantities of wine.

## SCURVY.

Swollen and spongy gums, dark spots and blue blotches, like bruises, about the legs, and a brawny hardness about the calves of the legs and under parts of the thighs, are the outward and visible signs of this disease.

Double the man's daily allowance of lime-juice, and give him any kind of vegetables, preserved or otherwise, that you have on board, with a liberal allowance of pickles, beer, or wine. Give also the quinine mixture (No. 9) three times a day, and wash out the mouth with weak Condy's fluid and water.

If the provisions of The Merchant Shipping Act, 1867, be faithfully carried out by the Government, as well as by your owners and yourselves, scurvy will soon be an unknown disease in the merchant navy of this country; and if the article in this book headed 'Prevention of Disease' be strictly followed, no serious outbreak of scurvy need be feared by the captain of any ship.

## RHEUMATISM.

Rheumatism may be caused by exposure to cold and wet, or may be the result of pox or clap. No description of this disease is needed, but it is sometimes so severe as to render the patient quite helpless, and is then called acute rheumatism, which lasts from fourteen to twenty days.

If a man be attacked with this last form of the disease, keep him very warm, and wrap up the joints affected in flannel. Get the bowels open, and, if there is very much pain, give him 10 grains of Dover's powder every night, and the saline mixture (No. 1) three times a day. Salicine is an excellent remedy for rheumatism. It must be given in 20 grain doses, dissolved in a little water, three times a day. You must move him very gently indeed, and meddle with his limbs in doing so as little as possible, for the pain of a rheumatic joint, when roughly handled, is horrible to bear. During recovery give the quinine mixture three times a day, and rub the affected parts with opodeldoc or hartshorn and oil.

For the more chronic forms of rheumatism and for that following clap, mix 5 grains of iodide of potassium with each dose of the saline mixture, and give it three times a day. For lumbago, or pain in the back, open the bowels well, and apply a

mustard poultice or turpentine fomentation to the small of the back.

Rheumatism is, however, often very obstinate, and more sailors are permanently disabled year by year from this than from any other disease.

The provisions of The Merchant Shipping Act, 1867, require all sleeping places to be dry and well ventilated, and will, with dry clothes and dry bedding, prevent more rheumatism than any captain, mate, or doctor can possibly cure.

## ITCH.

This disease is caused by dirty habits as to clothes and person.

The spots, which are sometimes like small bladders of water, usually commence between the fingers, but soon spread indifferently over any part of the body, particularly the arms, legs, and buttocks.

After the patient has washed well with soft soap and warm water, make him smear all parts of the skin affected, with the sulphur ointment (Receipt No. 18) and keep him in a greasy state until all sense of itching or a desire to scratch has passed away.

The man should, as far as is practicable, lie apart from the rest of the crew. Burn all his bedding and greasy clothes when he is well, if you can afford to do so, as you may thereby save a round of the disease among your hands.

## SURGICAL DISEASES.

## VENEREAL DISEASES.

THESE diseases, which are the bane of the mercantile marine service, may often be prevented by directing the men (if they go astray) to wash the parts with a lotion of one drachm of Condy's fluid to half a pint of water, and use an injection of the same, as soon as they come on board.

They include: -

- (1) External Clap.
- (2) Gonorrhœa or Clap.
- (3) Chafes.
- (4) Chancre.
- (5) Bubo.

There are also other complaints which may follow at a later period. Swelled testicle often follows clap; spots and ulcers on the skin, and sore throat, often follow chancre.

(1) EXTERNAL CLAP.—This is a common disease with men who have long foreskins. It arises from uncleanliness. Dirt collects under the foreskin, and irritates the glans penis or nut.

A thick discharge comes from under the foreskin, which is swollen and drawn back with difficulty. The nut is red and swollen, but there is no ulcer.

The foreskin must be well pulled back, and it, as well as the nut, washed with warm water. Both must then be swabbed with the caustic lotion (Receipt No. 11). A piece of lint should then be placed between the nut and foreskin, and the foreskin drawn forward into its proper place.

Attention to cleanliness for a few days, with repetition, if necessary, of the swabbing, will effect speedy cure.

(2) CLAP.—This disease generally appears from two days to a week after connection with a foul woman.

Symptoms.—There is itching at the end of the passage through which the urine flows; the nut also swells, and its skin has a red shiny look; there is a feeling of heat and smarting when passing water, which soon amounts to scalding, and sometimes causes great pain. The stream of urine is twisted and broken, and in bad cases may stop altogether. Then follows a greenish-yellow discharge, at first thin, but afterwards thick and mattery. There is also a sense of itching along the under surface of the yard in the direction of the vent, and the patient is often troubled by painful erections at night. If the foreskin be long, and the discharge from the passage allowed to collect underneath, the foreskin

swells, cannot be drawn back, and external clap, as well as ordinary clap, appears.

Treatment.—Keep the patient on low diet, and let him drink freely of barley water, toast and water, or linseed tea. Give a purging pill, followed by a dose of salts, which may be repeated every other morning. When the symptoms first appear, if there is only a little itching with a slight discharge and no scalding, an injection of one drachm of Condy's fluid, two drachms of laudanum, and half a pint of water, may be used frequently, and this may cut it short. Where, however, there is much inflammation and scalding, leave off the injection and give the soothing mixture (Receipt No. 4) three times a day. Let the yard be soaked frequently in hot water, and support it with a handkerchief or a triangular bandage fastened to the waist. When the inflammation is subdued and the scalding has ceased, the injection of sulphate of zinc (Receipt No. 16) may be used night and morning, and should the discharge still continue, the clap mixture (Receipt No. 5) should be given three times a day. If, after some weeks, a thin watery discharge, called a gleet, is left, continue the injection and give, instead of the clap mixture, twenty drops of tincture of steel in a little water three times a day.

How to use the Injection.—A squirt is to be filled with the injection, the end of this squirt put into the passage as far as it will go, and the injection

then slowly and steadily squirted into the yard. When the squirt is taken away, the passage should be closed by the finger and thumb for a few seconds to keep in the injection.

#### LESSER DISORDERS WHICH MAY FOLLOW CLAP.

ERECTIONS.—The yard should be soaked in water as hot as can be borne for twenty minutes before turning in. If the erections occur in spite of these precautions, the pain is relieved by sitting on cold metal, or sluicing the yard well with cold water, and by giving a double dose of the soothing mixture (No. 4) every night.

STOPPAGE OF URINE. See page 84.

Swelled Testicle.—The patient has pain and a sense of weight in the testicle, and pain up the cord. The testicle soon increases to two or three times its natural size, and becomes very tender. There is also a feeling of sickness, and of pain in the loins, furred tongue, confined bowels, and general fever.

Treatment.—A good purge, and the soothing mixture (No. 4) three times a day. The testicle must be well kept up by a bandage or handkerchief, and the patient must, if possible, knock off work, as rest is very important. Make a number of small pricks with the point of a lancet over the swelling, just deep enough to penetrate the skin and draw blood. Then apply hot fomentations or a hot linseed-meal poultice,

with which a teaspoonful of laudanum should be mixed. Warmth is generally preferred to cold; but if cold appear to give more relief, apply a lotion made with Goulard extract and laudanum (Receipt No. 13). Barley-water, linseed-tea, or toast and water should be given. A bandage to keep up the testicle should be worn for two or three months.

(3) Chafes.—These are sores on the surface, generally caused by dirt. They mostly appear in the groove between the foreskin and the nut, are of small size, and easily cured.

Treatment.—Wash well with warm water, use the caustic lotion (Receipt No. 11), and apply dry lint.

(4) Chancre.—This begins as a small pimple, which itches a good deal; a watery head then forms, which bursts and leaves a sore. Chancres may be hard or soft. The hard chancre has a gristly edge, and is best treated, and must be kept constantly wetted, with black wash. The soft chancre only requires to be kept clean, and touched occasionally with caustic. A little iodoform dusted over the part often hastens the cure. The bowels should be kept open by an occasional blue pill.

Mercury should not be given at all by an unprofessional person. All venereal sores will heal without mercury, if the directions given above are strictly followed.

Chancres are often followed by sore-throat, spots

on the skin, pains in, and swellings on, the bones, and ulcers.

Give all such cases 5 grains of iodide of potassium in a little water three times a day for several weeks, let them wash out their throats with the gargle (Receipt No. 10), and dress the ulcers carefully with simple ointment. Give them also a double allowance of lime-juice daily, to prevent the great tendency to scurvy that exists in all these patients.

(5) Bubo.—A swelling in the groin, which becomes red, softens, and, if left to itself, bursts, and discharges matter by a small hole.

Treatment.—Hot linseed-meal poultices and rest; when the skin becomes very thin, the bubo may be opened. This should be done by lancing the swelling across, not lengthways; the poultice should be continued for two or three days afterwards, and should be followed by lint and water dressing or carbolic acid lotion. The bowels must be kept open with occasional purgatives, and after the bubo has burst, or been opened, you should help on the man's strength by good food and a small quantity of wine, beer, or grog.

## RUPTURE.

This is a common affection among sailors, on account of the violent exertions undergone in hauling at ropes, reefing, &c.

A swelling, at first small, is seen in the groin,

which disappears when the man lies down, and returns when he stands up or coughs; there is little pain, but a feeling of dragging at the lower part of the body. If neglected, the swelling is liable to be nipped by the walls of the passage through which it has come. The channel of the bowel is then closed, the swelling cannot be pushed back into the belly, and is then said to be strangled. In such a case the swelling in the groin is elastic, and more or less painful to the touch. The patient at first has pain in the bowels, which are obstinately confined; after a short time, he vomits, and eventually brings up excrement, when his condition is, of course, very dangerous.

Treatment.—Give the man from 40 drops to a dram of laudanum, put him in a warm bath at a temperature of 100 degrees Fahr., and keep the water at that temperature.

When the patient feels faint from the heat of the bath, the swelling is to be pressed very gently and steadily upwards, always following the direction in which it has come down.

Be careful not to use too much force, as by so doing the bowel may be much injured. The attempt to put it back should not be continued for more than twenty minutes or half an hour.

The patient must now be taken out of the bath, wiped dry, and put to bed. If the above treatment has not succeeded, and snow or ice be handy, a

bladder or oil-silk bag filled with either is to be kept for some hours on the swelling, and often, under the constant application of cold, the swelling is so reduced that the bowel is easily pushed back.

When the swelling has been returned, a large pad of lint should be placed over the spot and kept there by a figure of 8 bandage, passed around the body, above the hips, and round the upper part of the thigh.

All men who are ruptured should be supplied with a truss at the earliest opportunity.

## STOPPAGE OF URINE.

That is, when a man is unable to pass his water. It is caused—

- (1) By holding the water too long after a desire to pass it, or after drinking heavily.
  - (2) By Stricture.
  - (3) By Clap.
- (4) By an injury to the passage, and by falling on or striking the crutch.
  - (5) By long-continued exposure to wet or cold.

Treatment.—Give the patient 40 or 50 drops of laudanum, place him in a bath at 100 degrees Fahr., and keep it at that temperature for a quarter of an hour. The patient will often pass a little water in the bath, which will give great relief. If, however,

these means fail, try to introduce a catheter gently into the bladder.

How to introduce a Catheter.—Make the patient stand up against a bulkhead, and sit down in front of him. Having taken the wire out of the instrument, oil the latter, and hold it like a pen between the fingers of your right hand. The yard of the patient must be held in your left hand, and the instrument gently put into the passage, and pushed steadily on into the bladder. The instrument must be held loosely between the fingers, and on no account must any force be used. If any obstacle be met with, overcome it by steady and moderate pressure, and not by sudden force. The entrance of the instrument into the bladder is at once shown by a flow of urine. If you do not succeed after a quarter of an hour's trial, leave off for a time. A dose of salts should be given to clear out the bowels, and afterwards another dose of laudanum. If this fail, the warm bath should be repeated, and the stricture will generally yield a little, allowing, at all events, a small quantity of urine to dribble away.

Sometimes, after severe straining, the patient feels that something has given away suddenly, and is immediately relieved. This is a very dangerous sign, for it indicates that the passage has burst behind the stricture, and that the urine has escaped into the neighbouring parts. In a few hours the yard begins to swell, the skin becomes tight and shiny, and the

patient complains of a burning pain in the crutch. He will be able to pass water, but the relief is only of a temporary nature.

It is necessary in such a case to push a lancet deeply into the middle of the fork, behind the purse, taking care to keep exactly in the middle line, in order to give escape to the urine. Small cuts must also be made on each side of the purse, to let out the water there collected. Keep up the strength of your patient with good food and wine or grog, and see that the wounds are well washed with warm carbolic acid lotion at least three times a day.

## DRIBBLING OF URINE.

May be caused—

- (1) By Piles.
- (2) By Stricture.
- (3) By a Stone in the bladder.

In children it may be caused by worms in the lower part of the bowels.

Treatment.—Little can be done at sea in the way of treatment. If the patient be a lad, and he wets his bed-clothes at night, let him be roused at the end of every watch and made to pass water. In older patients, no satisfactory treatment can be adopted by a non-professional man, except by giving a double dose of the soothing mixture (No. 4) now and then at bed-time.

#### BOILS.

Boils.—These are very common among sailors, and are generally caused by constant irritation of skin from salt water—hence the term 'salt-water boils.'

Treatment.—When the boil is beginning to form, rub it with lunar caustic, and, if very painful, put over it lint dipped in a weak mixture of rum and water. Linseed-meal poultices should afterwards be used, and in time the boil will soften, the core come out, and the hole close. You will help the healing by using the basilicon ointment.

If the patient be of full habit, give him a black draught twice a week.

Whiteow.—Inflammation of the fingers with great pain and swelling. The pain is deep and throbbing, and the skin red, swellen, and shiny. It is most frequently caused by running a splinter of wood under the nail, or into the finger.

Treatment.—Whitlows should be treated early, for the fingers may be lost by extension of the inflammation to the deep parts.

As soon as the back of the finger or hand is red, swollen, and puffy, make a deep cut lengthways along the middle of the finger in front, to allow the escape of matter. A linseed poultice must then be applied and changed three times a day, but in spite of all care the first bone of the finger will sometimes be killed.

very important. If the piles bleed, give an injection of the soothing lotion (No. 13.)

## GUM-BOIL.

The pain is very severe, especially at night. A small cut should be carefully made into the swelling with a lancet, and instant relief will follow the escape of matter.

## BLEEDING FROM THE NOSE.

This is Nature's remedy for the cure of headache, and should not be interfered with. If, however, it be very severe, cold applied to the nose and to the back of the neck will be all sufficient, except in very obstinate cases, when the nostrils must be very gently and carefully plugged with lint, rag, or a piece of sponge.

Scale of Medicines and Medical Stores issued and caused to be published by the Board of Trade in pursuance of The Merchant Shipping Act, 1867.

Preparations from British Phurnucopoda, 1867	Names of Medicines,	undern	tion for Sh nentioned nd Boys (fo	number o	of Men
This Column is added for the use of Druggists supplying the Medicines indicated	Medicaments, &c.	10 and under	11 to 20 inclusive	21 to 40 inclusive	
2	Alum	2 ozs.	4 ozs.	6 ozs.	8 ozs.
Copulba	Baisam of copalba Bieurb, of sodu	4 ,, 8 ,,	8 ,,	12 ,, t	16 ,,
Mist. Seume Co	Black draught	1 pint	2 pints	3 pints	4 pints
Lotio Hydrarg, Nigra	Black wash	1 ,,	2 ,,	2 ,,	3 ,,
than 80 per cent, of free	dlsinfectunt of up-	1 gul.	2 guls.	4 guls.	4 gals.
Carbolle or Cresylle Acid.  A liquid containing Perman.	proved quality . )	d pint	1 pint	1 pint	2 pints
ganate of Potash or Soda equivalent to not less than 2'5 per cent. of Permanga-		. 1	•		•
nate of Potash.	Castor oil	1 lb.	2 1bs.	3 lbs.	4 lbs.
Potussiu Tartras Acidii	Cream of tartur	2 ozs.	4 ozs.	8 ozs.	12 ozs.
Ess. Menth. Pip	Epsom salts	3 lbs.	6 lbs. 1 oz.	10 lbs. 2 ozs.	12 lbs. 3 ozs.
Fr. Zlugib. Fortlor	" ginger	3 11	1 ,,	2 ,,	В ,,
Liq. Plumbi Subacet	Goulard's extract	1 ,,	2 ozs.	8 ,,	4 ,,
r. Opll	Landanum	2 ozs.	4 ,,	6	8 ,,
Argenti Nitras	Linseed meal	7 lbs.	14 lbs.	28 lbs. 1 oz.	28 Hbs. 1 oz.
	Nitrate of potash	4 028.	6 ozs.	8 ozs.	10 ozs.
Ung. Resinæ	Ointment, Basilloon	3 ,, 1 oz.	6 ,, 2 ,,	8 ,,	10 ,,
Puralfinum molle	40 10 /1 1	6 ozs.	12	16 ,,	24 ,,
Ung. Galle cum Opio	Ointment of galls and opium	l oz.	2 ,,	3 ,,	4 ,,
" Sulph		6 ozs.	12 ,, 6 drs.	16 ,, 8 drs.	16 ,, 12 drs.
Sp. Ammon. Aromat	Salicine	2 ozs.	4 ozs.	6 ozs.	8 ozs.
	monia	4 ,,	6 ,,	8 ,,	12 ,,
Liq. Epispusticus	Blistering fluid	1 oz. 4 ozs.	1 oz. 8 ozs.	l oz. 12 ozs.	1 oz. 16 ozs.
Lin. Opil	Opodeldoc	6 ,,	8 ,,	10 ,,	12 ,,
l'r. Camph. Co	Pills, Blue	I doz.	6 ,, 2 doz.	8 3 dcz.	10 ,, 4 doz.
" Ipecac. c. Scilla . 5 gr.	oplum	2 1 ,,	4	6 ,, 8 ,,	8 ,,
Colog a Hyora Kun	, Oplum		1 6 ,,	8 ,,	10 ,,
Puly, Catechu Cp. 1		1 oz.	2 ozs.	3 ozs.	4 ozs.
c. Oplo. parts ;	,, Dover's	1 ,,		3 ,,	4
,, 10000	,, lpecacuan	1 ,,	2 ,,	8 ,,	4 ,,
Sp. Ætheris Nitrosi		1 ., 4 ozs.	6 ,,	3 ,, 8 ,,	$\frac{4}{10}$ ,,
	Sulphate of zinc	l oz.	2 .,	8	4 ,,
Lin, Terebinthine	Sulphur (sublimed) Turpentine linhment .	4 ozs.	3 lbs. 6 ozs.	6 lbs. 8 czs.	8 Ibs. 12 ozs.
Acid, Sulph, Arom	Elixir of vitriol	2	4	G n	8 .,
Liq. Ammonhe	Spirits of hartshorn . Bromide of potassium .	2	41	10 ,,	12 ,,
Pulv. Jalapæ	Chloric other	3	5	8 ;	10 ,,
	Powder of jalap Camphor	2 ,,	4 .,	б.,,	8 ,,
Tr. Ferri Perchloridi	Tincture of steel	1) 11	6	6 ,, 8 ,,	8 ,,
			,,,	***	,,
ADI	OPTIONAL DRUGS, &C., RECO	MMENDE	D.		
Tinet lodi	Chlorodyne	l oz.	•)	3 ozs.	4 ozs.
Tinct, lodi	. Tincture of lodlne	1 ,,	2 ,, 3 oz.	3 ., 1 oz.	1 oz.
Creosotum	Carbolic wold nure	1 07	fozs.	1	1 .,
Acidum Carbolleum	Calomel	4 ,,	6 ,,	B ozs.	12 ozs.
Potassa Carbonas Limmentum Calcis	Carbonate of potash	1	ti ,,	B	10 ,,
rammentum cuters	Mustard				8 pin 14 lbs.

For voyages of three months and under, half the quantity of the above medicines muy be carried.

<sup>\*</sup>Omltextract of liquorice, and substitute arcmatic spirit of ammonia 1 oz. to 1 pint of the mixture.

\*As antiseptle and deoderlsing agents for common use. Samples of the disinfectants supplied will be occasionally taken for analysis, to determine whether they fulfil the requirements of the Board of Trade.

\*For purifying drinking water when necessary.

\*Treble the quantity above indicated to be taken to all tropical ports.

Scale of Medicines and Medical Stores issued and caused to be published by the Board of Trade in pursuance of The Merchant Shipping Act, 1867—(continued).

		carry	ing the umber of M	n for Ship inderment Ien and B nonths)	tioned
PARTICULARS	Scales of Medical Stores and Necessaries	10 and under	11 to 20 in- clusive	21 to 40 inciusive	41 and up- wards
1 grain, 2 grains, &c., must be stamped in English figures and words on each respective weight; the word scruple must not be used at all (the scruple weight being marked 20 grains); the 3 dram, 1 dram, and 2 dram	Adhesive plaster on unbleached calico in tin case	Lih	2 vds. † lb. 1 set	3 yds. 1 lb. 1 set	4 vds. 1 lb. 1 set
weights must be also marked in English figures and words. The fluid drop measure must be marked dram and divided into 40 drops, the word minim being omitted altogether.	Graduated drop mca- sure	1	1	; 1	1
The fluid 2 oz. measure must be marked 2 ounces, 1 ounce, 2 table spoonfuls, 1 table spoonful,	Graduated 2-oz. measure	1	1	. 1	1
and 1 tea spoonful.	6-oz. bottics	2 1	I doz. 2 ,, 1 pair 2 , 1 1	1½ doz. 3 ,, 1 pair 4 1	4 ,, 1 pair
Lcg and arm size . Triangular bandage, base 48 ins., sides 33 ins. cach Flannei bandage, 7 yds. long,	Bandages. Triangular do.  Flannei do.	3	6 3 2		8 4
6 ins. wide	Calico			4 yds. 4 ,,	6 yds.
Printed directions for usc	Splints, common	l paper l set l	1 set 1 1 1	1 set 2 1 1	1 paper 1 set 2 1
86-inch single reversible	Bougies Esmarch's tourniquet (piain, with hooks) Gum elastic catheter Trusses Sponges Plaster of Paris, for	1 1 1 1	4 1 4 2 2	6 1 6 8 8	1 sct 1 1 sct 3 4
	bandages	1 ib.	2ibs.	3 ibs.	3 ibs.
	edition). Oatmeal	1 4 ibs. 2 4 4 11 4 11	1 8 ibs. 4 · · · 8 · · · 8 · · · 8 · · · 28 · · · 12 · · · 12 · · · · · · · · · · ·	1 16 lbs. 8 " 16 " 16 " 16 " 16 " 42 " 24 "	1 24 lbs. 12 ,, 24 24 24 ,, 56 ,, 86
Prescrved	Essence of meat(\frac{1}{4}\)-pint) Desiccated soup Vegetables, dried or compressed Potato (if not in scale of provisions) Wine (Port) Brandy	6 6 tins 4 lbs. 4 3 botts. 2	12 ,, 12 tins 8 ibs. 8 ,, 28 ,, 6 botts.	24 24 tins 16 lbs. 16 ., 56 ., 12 botts.	86 86 tins 24 ibs. 24 74 18 botts

Scale of Medicines and Medical Stores issued and caused to be published by the Board of Trade in pursuance of The Merchant Shipping Act, 1867.

the Board of Trade in	pursuance of The Mercha	nt Ship	ning Act,	1867.
Preparations from British Pharmacopæia, 1867	Names of Medicines,	the under-	on for Ships mentioned oys (for 12 n	No. of Men
This Column is added for the use of Druggists supplying the Medicines Indicated	Medicaments, &c.	10 and under	11 to 20 inclusive	21 and upwards
Copalba	Alum	1 oz. 4 ozs.	2 ozs. 8 ,,	3 ozs.
*Mist. Sennæ Co	Black draught	8 ., 1 pint	12 2 pints	16 ,, 3 pints
Lotio Hydrarg, Nigra	Black wash	1 ,,	$\begin{bmatrix} 2 \\ 1 \end{bmatrix}$	2 ,,
A mixture containing in each	†Carbolic acid, liquid	å gal.	1 gal.	2 gals.
100 parts not less than 80	Or Crystal	1 lb.	1 lb.	2 lbs. 8 gals.
parts of Carbolic (or Phenic) and Cresylic Acids, and	Or Jeyes' Perfect Purifier, liq. Or Sanitas oil	2 gals.	4 gals.	8 ,,
their Homologues; and not	Or Tuson's Liq. Disinfectant	1 gal.	11/2 ",	3 ,,
more than 20 parts of water	Or Fletcher's Pino Phenol	2 gals.	4 ,,	8 "
	Puritier fthloride of zinc (Burnett's)	l gal.	1 gal.	2 gals.
	Condy's Crimson Fluid	1 pint	1 pint	1 pint
	Red Cross Antiseptic Fluid.	1 1,1,	1 2 ,,	1 ,,
Potassæ Tartras Acida	Cream of Tartar	1 lb. 2 ozs.	2 lbs. 4 ozs.	3 lbs. 8 ozs.
A Outside Thirthis Acida.	Epsom sults	3 lbs.	6 lbs.	12 lbs.
Ess. Menth. Pip	Essence of peppermint		1 oz.	2 ozs.
Tr. Zingib. Fortior Liq. Plumbi Subacet	Gon'ard's extract	l oz.	1 ,, 2 ozs.	2 ,,
inq. i minor sankeet.	I lodide of potassium	1 02.	2 ,,	4 ,,
Tr. Opii	Laudamun	2 ozs.	4 ,,	8 ,,
Argenti Nitras	Linsced meal	1 OZ.	14 lbs. 3 oz.	281bs. 1 oz.
Argenti Nitras	Nitrate of potash	2 OZS.	4 ozs.	8 ozs.
Ung. Resince	Ointment, Basilicon	3 ,,	6 ,,	10 ,,
, Hydrargyri	Mercurial Simple	1 oz. 6 ozs.	$\begin{bmatrix} 2 & " \\ 12 & " \end{bmatrix}$	4 ,,
,, Gallæ cum Opio	Ointment of galls and opium	1 oz.	2 ,,	16 ,,
" Sulph	Ointment of sulphur	6 ozs.	12 ,,	16 ",
	Iodoform	2 drs. 2 ozs.	4 drs. 4 ozs.	6 drs.
Sp. Ammon. Aromat	Aromatic spirits of ammonia		6 ,,	6 ozs. 8 "
Liq. Epispasticus	Blistering fluid	1 oz.	1 oz.	1 oz.
Tin Oni:	Olive oil		8 ozs.	12 ozs.
Lin. Opii	Paregorie	3 ozs.	6 ,,	10 ,,
Pil. Hydrarg 5 gr.	l'ills, Blue	1 doz.	2 doz.	3 doz.
,, Ipecac. c. Scilla 5 gr.	" Cough	2 ,,	4 ,,	6 ,,
" Sapon. Co 5 gr Coloc. c. Hyose. 5 gr.	,, Opium	3 ,,	$\begin{bmatrix} 2 & \cdots & \\ 6 & \cdots & \end{bmatrix}$	3 ,,
,, Rhei Co 5 gr.	,, ,, Mild	3 ,,	6 ,,	8 ,,
Pulv. Rhei Co	Powder, comp. rhubarb	2 ozs.	4 0ZS.	8 ozs.
"Cret. Arom. c. Opio eq. pts	. § " diarrhæa	1 )z.	2 ,,	3 ,,
" Ipecac. Co	, Dever's	7	2 ,,	3 ,,
	ipecacuan	1 ,,	2 ,,	3 ,,
Sp. Ætheris Nitrosi	Sweet spirits of nitre	1 ,,	2 ,, 2 ,, 2 ,, 2 ,,	3 ,,
	Sulphate of zinc	1 ,,	2 ,,	3 ,,
The Hyoroxani	Sulphur (sublimed)	2 H)s.	3 lbs.	6 lbs.
Tr. Hyoseyami	Tincture of henbane	1 oz.	2 ozs.	3 ozs. 12
Lin. Tercbinthing	Turpentine liniment	2 ,,	4 ,,	6 ,,
Acid. Sulph. Arom		4 ,,	6 ,,	10 ,,
Liq. Ammonite	Spirits of hartshorn	4 1,	6 ,,	10 ,,
	Chloric ether	3 ,,	5 ,,	8 ,,
Pulv. Jalapæ	Powder of jalap	3 ,,	5 ,,	8 ,,
Tr. Ferri Perchloridi	Camphor	", ",	4 ,,	8 ,,
Tr. Benzoini Co	Friar's bal-am	6 ,,	6 ,,	6 ,,
	and enlectitute arometic exicit			

<sup>•</sup> Omit extract of liquorice, and substitute aromatic spirit of ammonia, 1 oz. to 1 piut of mixture.

† As antiseptic and deodorising agents for common use. the mixture.

For purlfying drinking water when necessary.

Treble the quantity above indicated to be taken to all tropical ports.

PARTICULARS	Scales of Medical Stores	the under-	n for Ships mentioned ys (for 12 m	No. of Men
	and Necessaries	10 and under	11 to 20 inclusive	21 and upwards
1 grain, 2 grains, &c., must be stamped in English figures and words on each respective weight; the word scruple must not be used at all (the scruple weight being marked 20 grains); the ½ dram, 1 dram, and 2 dram weights must be also marked in English figures and words.	Adhesive plaster on unbleached calico in tip case Lint Scales and weights .	1 yard 1 lb. ° 1 set	2 yards 3 lb. • 1 set	3 yards 1 lb. 1 set
The fluid drop measure must be marked dram and divided into 40 drops, the word minim being omitted altogether.	Graduated drop measure	• •	1	1
The fluid 2 oz. measure must be marked 2 ounces, 1 ounce, 2 table spoonfuls, 1 table spoonful, and 1 tea spoonful.	Graduated 2-oz. measure 6-oz. bottles Corks for bottles Scissors Syringes Lancet Abscess do.	1 doz. 1 ,, 1 pair 2 1	1 doz. 11 ,, 1 pair 2 1	1 doz. 2 ,, 1 pair 4 1
Leg and arm size	Bandages	3 2 1 3 yards 2 ,,	6 3 1 4 yards 3 ,,	6 4 2 6 yards 6 ,,
Printed directions for use	Needles, pins, thread, and tape Splints, common Enema syringe Pewter cup Teaspoon (pewter) Bougies Esmarck's tourniquet	1 set 1 1 set	1 paper 1 set 1 1 1 1 set	"
No. 8 (Gum Elastic)	(plain, with hooks) . Catheter Gum elastic catheter .		· 1 1 complete se	
36-inch single reversible	Trusses	1 1 1 1b.	2 2 1 lb.	3 3 1 lb.
	Bed-pan Oatmeal groats, crushed Arrowroot Pearl barley Corn flour Rice Or sago Or cerealine	4 lbs. 2 ,, 4 ,, 4 ,, 4 ,, 4 ,, 4 ,,	1 8 lbs. 4 ,, 8 ,, 8 ,, 8 ,, 8 ,,	1 16 lbs. 8 ,, 16
Preserved	Sugar	14 ,, 6 ,, 6 ., 6 tins 4 lbs.	28 ,, 12 ,, 12 ,, 12 tins 8 lbs.	56 ,, 24 ,, 24 ,, 24 tins 16 lbs.
	of provisions)	14 ., 3 botts. 2 ., 2 doz.	28 6 botts. 4 4 doz.	56 ,, 12 botts. 6 ,, 6 doz.

## DOSES AND DIRECTIONS FOR USE OF MEDICINES.

THE doses of these medicines are calculated for men, so that half the quantity must in all cases be given to patients between ten and sixteen years of age. The names of all *outward* applications are printed in thick black type (as Alum, &c.) to distinguish them from medicines that are to be taken internally.

One ounce of liquid is equal to 2 table-spoonsful, and to 8 tea-spoonsful; one dram of liquid is equal to 40 drops.

One dram of any solid drug is equal to 60 grains; one ounce of any solid drug is equal to  $437\frac{1}{2}$  grains.

Alum.—1 dram in a pint of water is a useful gargle for a sore throat, and a lotion for cold in the eyes.

BALSAM OF COPAIBA.—A good remedy for the clap. (See Receipt No. 5.)

Dose: half a dram.

BICARBONATE OF SODA.—Useful for indigestion. Forty grains mixed in a glass of water with an ounce of lime or lemon juice makes a refreshing effervescent drink. (See Receipt No. 6.)

Dose: 10 to 40 grains.

BLACK DRAUGHT.—The best purgative.

Dose: 1 oz.

Black Wash.—A lotion for Chancres.

Carbolic Acid.—To be mixed with water, and used for washing decks, bunks, and all places in which foul smells exist.

A table-spoonful in each bucket of water for washing decks and bunks, and half that quantity for scrubbing clothes or washing the skin, will be quite sufficient. (See also Receipt No. 14 and 15.)

Whatever variety be used, attend to the directions printed on the case or bottle.

CASTOR OIL.—A good and safe purgative.

Dose: 1 oz.

Solution of Chloride of Zinc.—For cleansing and deodorising purposes. To be used according to the directions printed on the bottle.

CREAM OF TARTAR.—A useful purgative for certain cases, as directed in this book. (See Receipt No. 1).

Dose: 20 grains to a dram.

Condy's Crimson Fluid.—Two or three drops into each gallon of water wanting purification for drinking purposes. Useful also as a gargle for sore throat, and as an injection, as directed in this book.

EPSOM SALTS.—A good purgative when it is necessary to repeat the dose.

Dose:  $\frac{1}{2}$  oz. to  $1\frac{1}{2}$  oz.

ESSENCE OF PEPPERMENT.—To flavour other medicines.

Dose: 10 to 20 drops.

ESSENCE OF GINGER.—(See Receipt No. 6.)

Dose: 5 to 20 drops.

Goulard's Extract.—For external application only. (See Receipt No. 12 and 13.)

IODIDE OF POTASSIUM.—To be given only as directed in this book.

Dose: 5 to 8 grains in an ounce of water.

LAUDANUM.—Useful to stop diarrhœa, to ease pain, and to procure sleep. In doses larger than those ordered here, it is poisonous.

Dose: 5 to 40 drops.

Linseed Meal.—For Poultices. (See Receipt No. 19.)

**Lunar Caustic.**—For external application; to be used only as directed in this book. (See Receipt No. 11.)

NITRATE OF POTASH.—Useful in fever mixtures. (See Receipt No. 1 and 2.)

Dose: 15 grains to half a dram.

Ointment (Basilicon).—For sores that will not heal with the use of simple ointment. Spread it sparingly on a rag, as much grease makes dirt, and does more harm than good.

Ointment (Mercurial).—To be used only for crabs, and rubbed in sparingly.

Ointment (Simple).—To be sparingly spread on a rag for sores and blisters. (See also Receipt No. 18.)

Olive Oil.—To smear over piles in aiding their return, and to paint over burns of the face. (See also Receipt No. 15).

Opodeldoc.—For external application only. To be used sparingly. Rubbing it on the skin relieves rheumatic and other pains.

PAREGORIC.—To relieve obstinate coughing in cases of bronchitis and consumption.

Dose: 1 tea-spoonful three or four times a day.

DOSES AND DIRECTIONS FOR USE OF MEDICINES. 97

BLUE PILLS.—To be used only as directed in this book.

COUGH PILLS.—One to be taken three or four times a day for a troublesome cough.

OPIUM PILLS.—These pills must be used cautiously.

1 for a dose, to procure sleep.

PURGING PILLS.—One or two to be taken at night to open the bowels.

MILD PURGING PILLS.—One or two to be taken at night to open the bowels.

COMPOUND RHUBARB POWDER.—(See Receipt No. 6.)

Dose: 20 grains to a dram.

DIARRHŒA POWDER.—To stop purging of the bowels.

Dose: 20 grains to a dram.

DOVER'S POWDER.—To procure rest and sweating. To be used only as directed in this book.

Dose: 10 to 15 grains.

IPECACUANHA.—In acute dysentery and bronchitis.

Dose: 5 to 15 grains.—(See Receipt No. 7.)

QUININE.—This should be measured out carefully in the quantities directed, kept as powder, and

each mixed, just before drinking, in a glass of water with a few drops of elixir of vitriol. To be used only as directed in this book. (See also Receipt No. 9.)

Dose: 2 to 10 grains.

SWEET SPIRITS OF NITRE.—(See Receipts No. 2, 5, and 7.)

Dose: 30 drops to a dram.

SULPHATE OF ZINC.—(See Receipt No. 16.)

Dose: half a dram in a glass of water, to cause vomiting; and 2 grains in an ounce of water, as an injection for the clap, and a lotion for the eyes.

SULPHUR.—To open the bowels gently. (See also Receipt No. 14, and Chapter on Fumigation, page 13.)

Dose: A tea-spoonful in a glass of water or any other fluid, or mixed with treacle.

TINCTURE OF HENBANE.—To be used only as directed in this book. (See Receipt No. 4.)

Dose: 30 drops to a dram.

#### TINCTURE OF RHUBARB.

Dose: I to 2 drams, to be given with 15 grains of soda and 10 drops of laudanum, in 2 oz. of water, twice a day, for gripes without much looseness.

Turpentine Liniment.—For external application only. (See Receipt No. 17.)

ELIXIR OF VITRIOL.—Very useful in diarrhæa, chronic coughs, and night sweatings. Quinine will not dissolve in water without the addition of a few drops. (See Receipts No. 3 and 9.)

Dose: 5 to 20 drops in a wine-glass of water

SPIRITS OF HARTSHORN (Liquid Ammonia).—When applied to the nostrils it revives persons in fainting-fits. Given internally it acts as a stimulant. (See Receipt No. 8.)

Dose: 5 to 20 drops in a wine-glass of water.

BROMIDE OF POTASSIUM.—Acts as a sedative to nervous system, is useful in sleeplessness and in epilepsy. (See Receipt No. 4.)

Dose: 10 to 20 grains.

CHLORIC ETHER.— Is a useful sedative. If 20 or 30 drops are sprinkled on a handkerchief and applied to the mouth and nose, it immediately relieves pain. (See also Receipts No. 3 and 8.)

Dose: 10 to 30 drops in water.

POWDER JALAP.—Is a useful purgative: 20 grains mixed with 10 grains of cream of tartar is an excellent medicine for dropsy.

Dose: 10 to 30 grains.

CAMPHOR.—2 ounces of, to half a pint of whisky or brandy, makes spirits of camphor; very useful in diarrhœa and cholera.

Dose of spirits of camphor: 5 to 20 drops.

FRIAR'S BALSAM.—Applied externally to cuts and wounds.—Internally, very useful in winter coughs.

Dose: 10 drops to 1 dram.

TINCTURE OF STEEL (Tincture of Perchloride of Iron).—A good tonic, useful in blood-spitting, bleeding from the bowels, dropsy and gleet.

Dose: 10 to 20 drops in a wine-glass of water.

SPIRITS OF SAL VOLATILE (Aromatic Spirits of Ammonia).—A useful stimulant. (See Receipt No. 8.)

Dose: 30 to 60 drops in water.

SALICINE.—Very useful in rheumatism. May also be used as a substitute for quinine.

Dose: 10 to 30 grains.

IODOFORM.—Removes the bad smells arising from ulcers and wounds, and assists in healing them. Should be lightly dusted over the parts.

OINTMENT OF GALLS AND OPIUM.—Useful for piles; to be smeared over them with the finger.

PLASTER OF PARIS.—Used to stiffen bandages. A dry bandage should first be applied to the limb. Another bandage must then have dry plaster of Paris thoroughly rubbed into its meshes; it is then rolled up, and some cold water poured upon each

end of it, so as to moisten it through. The wetted plaster bandage must then be applied smoothly over the dry one, making no reverses. More plaster may then be rubbed in if necessary, first mixing it with water in a basin. It hardens in the course of a few minutes, and, as it dries, forms a solid hard casing to the limb, and may be used for fractures instead of ordinary splints. It is also a useful application for severe sprains.

#### RECEIPTS.

#### 1.—Saline Mixture.

Cream of tartar . . . 2 drams Nitrate of potash . . . 1 dram Water . . . 6 oz.

2 tablespoonfuls for a dose.

#### 2.—Fever Mixture.

Nitrate of potash . . .  $1\frac{1}{2}$  dram Sweet spirits of nitre . . 3 drams Add water to . . . 6 oz. 2 tablespoonfuls for a dose.

#### 3.—Diarrhaa Mixture.

Elixir of vitriol . . . 2 drams Laudanum . . . 1 dram Chloric ether • •  $1\frac{1}{2}$  drams Add water to . . . 6 oz. 2 tablespoonfuls for a dose.

#### 4.—Soothing Mixture.

Bromide of potassium . . 1 dram Tincture of henbane . . . 2 drams Bicarbonate of soda . . 2 drams Add water to . . . 6 oz. 2 tablespoonfuls for a dose.

#### 5 .- Clap Mixture.

(This	must	he we	ell sha	ken.)
-------	------	-------	---------	-------

Balsam of copaiba . 3 drams
Sweet spirits of nitre . 1 dram
Add water to . 6 oz.

2 tablespoonfuls for a dose.

#### 6.—Stomachic Misture.

Compound rhubarb powder . 2 drams
Bicarbonate of soda . . 3 drams
Essence of ginger . . 1 dram
Add water to . . 6 oz.
2 tablespoonfuls for a dose.

#### 7.—Cough Mixture.

#### (To be well shaken.)

Powdered Ipecacuanha . . . 10 grains
Paregoric . . . . 2 drams
Sweet spirits of nitre . . . 3 drams
Treacle . . . . 1 oz.
Add water to . . . 6 oz.

2 tablespoonfuls for a dose.

#### 8.—Stimulant Mixture.

Spirits of hartshorn (liquid ammonia). 1 dram or Spirits of sal volatile . . . . 2 drams Chloric ether . . . . . 2 drams Add water to . . . . . . . . . . . . 6 oz. 2 tablespoonfuls for a dose.

# Carbolic Oil. Carbolic acid . . . . 1 dram Olive oil . . . . 4 oz. (Shake and mix thoroughly.)

#### 16.—Clap Injection.

#### 17.—Turpentine Fomentation.

Soak a large square of rag in the turpentine liniment, and put it on the skin; wring out in hot water any old square of flammel or woollen stuff at hand, put this over the turpentine rag, and over both a square of waterproof or any cloth to keep in the heat. Let the fomentation remain on at least fif ecn minutes.

#### 18.—Sulphur Ointment.

Mix thoroughly 2 oz. of sulphur with 8 oz. of scalded lard, simple ointment, or any other grease that is procurable.

#### 19.—Linseed Poultice.

Use boiling water. Add linseed meal to the water in very small quantities, and mix well, so that the poultice may not be lumpy; spread it quickly and smoothly with a *cold wet* spoon on linen rag, and put it on the part as hot as it can be borne.

#### ACT OF PARLIAMENT.

CERTAIN SECTIONS OF THE MERCHANT SHIPPING ACT, 1867.

#### SECTIONS 4 to 8.

These sections relate to the supply and issue of lime-juice, and of medicines and medical stores. They are to be found in every Official Log, and therefore need not be inserted here. All vessels should be furnished with a supply of lime-juice sufficient for at least twelve months' consumption, according to the number of hands on board. Make your steward mix it according to the following scale, and serve it out to each man at dinner every day.

				Lime-juice.	Water.	Sugar.
For	10 m	nen	$\frac{1}{2}$	pt. (10 oz.)	6 pts.	10 oz.
"	15	,,	$\frac{3}{4}$	pt. (15 oz.)	9 pts.	15 oz.
"	20	"	1	pt. (20 oz.)	12 pts.	20 oz.

The master is responsible that it is mixed properly and served out regularly every day, and is liable to a heavy penalty if the men become ill in consequence of its not being served out in the proper quantity. If any of the crew neglect to drink it, they do so at their own peril, and every such neglect must be entered in the official log-book of the ship.

#### SECTION 10.

The following rules shall be observed with respect to the medical inspection of seamen; that is to say,—

- (1) At any port where there is a Local Marine Board, the Local Marine Board, and at other ports in the United Kingdom, the Board of Trade may appoint a medical inspector of seamen.
- (2) Such medical inspector of seamen shall, on application by the owner or master of any ship, examine any seaman applying for employment in such ship, and shall give to the superintendent of the Mercantile Marine Office a report under his hand stating whether such seaman is in a fit state for duty at sea, and a copy of such report shall be given to the master or owner of the ship.
- (3) The master or owner applying for such inspection shall pay to the superintendent such fees as the Board of Trade direct, and such fees shall be paid into and form part of the Mercantile Marine Fund.
- (4) The said medical inspectors shall be remunerated for their services as the Board of Trade may direct, and such remuneration shall be paid out of the Mercantile Marine Fund.

(5) In British Possessions out of the United Kingdom, the governor or other officer administering the government for the time being shall have the power of appointing medical inspectors of seamen, of charging fees for inspections, when applied for, and of determining the remuneration to be paid to such inspectors.

FORM OF CERTIFICATE OF BIRTH.

	1	
	Signature of Master of Ship	
	Rank or Profession of Father	
D	Name and Maiden Surname of Mother	
AT SEA ON BOARD	and Surname of Eather	
	Sex	
Вити ок а Сипр	Namo	
	Date of Birth	

The following list is appended for use in connection with the death certificate on page 112. It is compiled from the list of diseases used by the Registrar-General of Births and Deaths for England and Wales, and is believed to contain the names of all mortal maladies likely to occur at sea.

A strict adherence to this brief list will very greatly assist the efforts of the Registrar-General of Shipping and Seamen in obtaining from the official log-books accurate returns of mortality at sea.

#### LIST OF CAUSES OF DEATH.

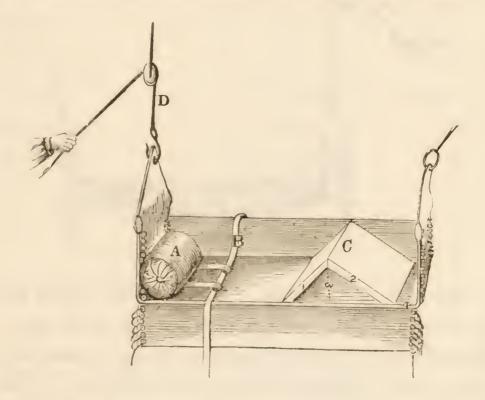
	PA	GE
Burns and Scalds	•	34
Cholera	4,	63
Consumption	•	57
Delirium Tremens		72
Diseases of Kidney	•	68
Dropsy	50,	68
Drowning	•	37
Erysipelas	•	55
Fever		4.5
,, Intermittent, or Ague	•	50
,, Scarlet		53
,, Yellow		56
Fits		69
Fractures, or Broken Bones		27
Hanging		37
Heart Diseases		60
Inflammation of the Lungs		57
Jaundice and Liver Diseases		60
Murder and Manslaughter.		
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Wounds .		20
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FORM OF CERTIFICATE OF DEATH.

	Signature of Master of Ship	
	Cause of Death	
	Rank or Profession	
Death at Sea on Board	Age	
u at Sea	Sex	
DEAT	Хато	
	Date of Death	

#### NOTE.

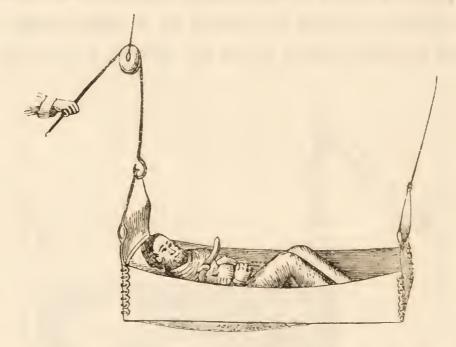
"In an Appendix to the first edition of this Work there is described an ingenious and very convenient contrivance for removing the wounded on board ship, as arranged by Medical Inspector A. C. Gorgas. It consists essentially of a common cot, which, for this purpose, is made considerably smaller than usual; two pieces of board are joined at a right angle, to make inclined planes under the knees; and there is



a pillow and a band at the upper part to hold the patient securely in position. When it is necessary to lower the foot of the cot, as in descending a hatch-

way, the inclined planes hold the lower part of the body securely and comfortably. This ambulance cot, suspended by the cords at the ends, makes a very good invalid's chair.

A stout arm-chair is sometimes securely slung, so that, by means of a whip on the mainyard, a wounded man, an invalid, or even a lady or child, securely tied in the machine by shawls, flags, cords, etc., may be safely hoisted or lowered from a boat, even when the weather is too rough to come very close



to the side of the ship. This is rather better than the cot, unless the patient is too weak to sit up."—
Extracted from 'Naval Hygiene,' by kind permission of the author, Joseph Wilson, M.D., Medical Director U.S. Navy.

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